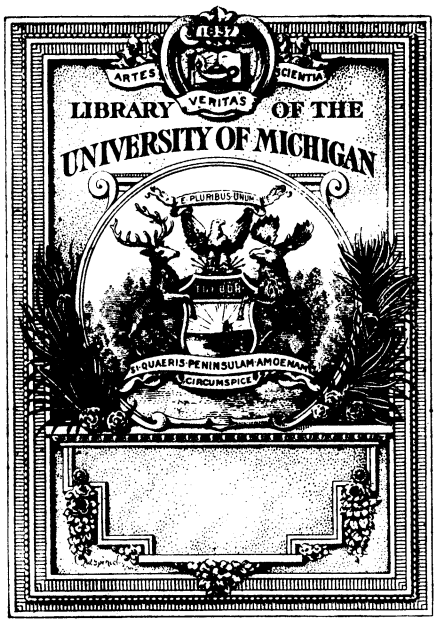
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PHILIPPINE
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BULLETIN
1910

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THE GOVERNMENT OF THE PHILIPPINE ISLANDS

WEATHER BUREAU

MANILA CENTRAL OBSERVATORY

MONTHLY BULLETIN
1910

PREPARED UNDER THE DIRECTION OF

REV. JOSÉ ALGUÉ, S. J.

DIRECTOR OF THE WEATHER BUREAU

MANILA
BUREAU OF PRINTING
1910

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INTRODUCTION.

The form of the BULLETIN as adopted in 1907 and slightly modified in 1908 and 1909 will be retained. To facilitate the understanding of the tables of observations published in the Meteorological Bulletin we beg to remark that the hours of observations are, for the first and second class stations, 2 a. m., 6 a. m., 10 a. m., 2 p. m., 6 p. m., and 10 p. m.; for third and fourth class stations, 6 a. m., and 2 p. m. The time used by the observers is that of the one hundred and twentieth meridian east of Greenwich. The barometer readings are corrected for capillarity and temperature and reduced to sea level, but *not* to standard gravity. The correction which is to be applied to the readings as given, whenever it is desired to reduce them to standard gravity, will be found at the head of each meteorological table.

We subjoin a list of all the meteorological stations of the Weather Bureau in operation on January, 1910, together with the names of the respective observers, who must be held largely responsible for the accuracy of the observations published in the bulletins.

SECONDARY STATIONS AND OBSERVERS OF THE WEATHER BUREAU.

Station.	North latitude.	East longitude.	Observers.	Class.
	° ′	° ′		
Jolo	6 03	121 00	Roman Kabigting	III
Isabela, Basilan	6 42	121 58	Francisco Rodriguez	IV
Zamboanga	6 54	122 05	Francisco Ventus	III
Davao	7 01	125 35	Lamberto Garcia	III
Cotabato	7 13	124 15	Manuel Galicia	III
Cagayan	8 29	124 38	Emiliano San Juan	III
Dapitan	8 40	123 25	Severino Hamac	IV
Butuan	8 56	125 32	Generoso Copin	III
Yap, Western Carolines	9 29	138 08	Mateo Gimenez	III
Tagbilaran	9 38	123 51	Genaro M. Bisarro	II
Surigao	9 48	125 29	Leoncio G. Santos	II
Maasin	10 08	124 50	Aguedo Espina	IV
Cebu	10 18	123 54	Domingo Angeles	I
Iloilo	10 42	122 34	Ricardo A. Luna	I
San Jose Buenavista	10 44	121 55	Benito Pelaez	III
Ormoc	11 00	124 36	Pedro Baltazar	I
Tacloban	11 15	125 00	Perfecto Paulino	II
Capiz	11 35	122 45	Jose E. de Leon	II
Borongan	11 37	125 26	Cesareo Montes	IV
Calbayog	12 04	124 36	Segundo Peñaflorida	II
Masbate	12 22	123 36	H. L. Heath	IV
Romblon	12 35	122 16	Dominador Calvo	III
Laoang	12 35	125 01	Manuel Oria Gonzales	III
Gubat	12 55	124 08	Faustino Calleja	III
Legaspi	13 09	123 45	Bernardino Costa	I
Sumay, Guam	13 24	144 38	Herbert Taylor	III
Calapan	13 25	121 11	Aquilino Nokom	III
Virac	13 35	124 14	Juan Lugod	III
Nueva Caceres	13 37	123 11	Eduardo Ontengco	III
Batangas	13 45	121 03	Enrico Cabral	III
Atimonan	14 00	121 55	Leon G. Guinto	I
Silang	14 14	120 58	Marcos Medina	IV
San Antonio, Laguna	14 22	121 32	Faustino Lafrades	IV
San Isidro	15 22	120 53	Bernardo Pecache	II
Tarlac	15 30	120 35	Valeriano Magat	IV
Baler	15 40	121 34	Jose Hernandez	IV

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SECONDARY STATIONS AND OBSERVERS OF THE WEATHER BUREAU—Continued.

Station.	North latitude.	East longitude.	Observers.	Class.
	° ′	° ′		
Dagupan	16 03	120 20	Domingo Torres	I
Bolinao	16 24	119 53	Ezequiel Reinoso	II
Baguio	16 25	120 36	Jose Ma. Sison	I
San Fernando, Union	16 37	120 19	Francisco Burgos	III
Echagüe	16 41	121 39	Godofredo Resurreccion	III
Candon	17 12	120 26	Luis Quismorio	IV
Vigan	17 34	120 23	Pastor Daroy	II
Tuguegarao	17 36	121 40	Jose C. de Leon	II
Laoag	18 12	120 35	Jose Saez	III
Aparri	18 22	121 38	Manuel Delegado	I
Santo Domingo, Batanes Islands	20 28	121 59	Claudio Castillejos	III

The signs and symbols employed in this BULLETIN are the following:

Symbol.	Equal to—	Symbol.	Equal to—
Ci.	Cirrus.	q	Squally weather.
Ci.-S.	Cirro-stratus.	u	Ugly or threatening weather.
Ci.-Cu.	Cirro-cumulus.	v	Visibility of distant objects.
A.-Cu.	Alto-cumulus.	w	Wet or heavy dew.
A.-S.	Alto-stratus.	●	Rain.
S.-Cu.	Strato-cumulus.	≡	Fog or mist.
N.	Nimbus.	⍿	Dew.
Cu.	Cumulus.	⊕	Solar corona.
Cu.-N.	Cumulo-nimbus	⊕	Lunar corona.
S.	Stratus.	☽	Lunar halo.
Fr.-Cu.	Fracto-cumulus.	○	Solar halo.
Fr.-N.	Fracto-nimbus.	↘	Heat lightning.
Fr.-S.	Fracto-stratus.	⍁	Thunderstorm.
S.-cf.	Stratus-cumuliformis.	⊢	Thunder without lightning.
N.-cf.	Nimbus-cumuliformis.	↘	Strong wind.
M.-Cu.	Mammato-cumulus.	(	Rainbow.
b	Bright, clear sky.	∞	Dry mist.
c	Cloudy weather.	S.	Smooth sea.
d	Drizzling, light rain.	L.	Long rolling sea.
g	Gloomy or stormy looking weather.	T.	Tide rips.
		M.	Moderate sea or swell.
o	Overcast.	H.	Heavy sea.
p	Passing showers of rain.	R.	Rough sea.

NOTE.—A small zero (°) or 2 (²) used as an exponent to the above symbols indicates respectively that the intensity of the meteor denoted by the symbols thus affected was small or very great.

INTRODUCCION.

Conservaremos en esta publicación la misma forma adoptada en 1907, y ligeramente modificada en 1908 y 1909. Para mejor inteligencia de los cuadros de observaciones que publicamos en el Boletín Meteorológico, téngase presente que las horas de observación para estaciones de primera y segunda clase son 2 a. m., 6 a. m., 10 a. m., 2 p. m., 6 p. m., y 10 p. m.; y en las de tercera y cuarta clase, 6 a. m. y 2 p. m. El tiempo seguido por nuestros observadores es el del meridiano 120 Este de Greenwich. Las lecturas barométricas se dan corregidas de capilaridad y temperatura y reducidas al nivel del mar, pero *no* á la gravedad normal. La corrección que por gravedad debe aplicarse, se da al principio de cada cuadro meteorológico.

Damos en el texto inglés una lista de todas nuestras estaciones con los nombres respectivos de los observadores, los cuales son en gran parte responsables de las observaciones que se publican en este BOLETÍN.

Los signos y símbolos usados en este BOLETÍN son los siguientes:

Símbolos.	Significado.	Símbolos.	Significado.
Ci.	Cirrus.	q	Achubascado.
Ci.-S.	Cirro-stratus.	u	Tiempo feo ó amenazador.
Ci.-Cu.	Cirro-cumulus.	v	Trasparencia del aire.
A.-Cu.	Alto-cumulus.	w	Húmedo.
A.-S.	Alto-stratus.	●	Lluvia.
S.-Cu.	Strato-cumulus.	≡	Niebla ó neblina.
N.	Nimbus.	⊔	Rocío.
Cu.	Cumulus.	⊕	Corona solar.
Cu.-N.	Cumulo-nimbus.	⊃	Corona lunar.
S.	Stratus.	∪	Halo lunar.
Fr.-Cu.	Fracto-cumulus.	○	Halo solar.
Fr.-N.	Fracto-nimbus.	↯	Relámpago sin trueno.
Fr.-S.	Fracto-stratus.	↯	Tempestad de trueno.
S.-cf.	Stratus-cumuliformis.	⊢	Trueno sin relámpago.
N.-cf.	Nimbus-cumuliformis.	↖	Viento duro.
M.-Cu.	Mammato-cumulus.	) (	Arco-iris.
b	Despejado.	∞	Niebla seca.
c	Nublado.	S.	Mar lisa ó llana.
d	Llovizna ó lluvia ligera.	L.	Mar tendida.
g	Mal cariz; tiempo cerrado, fosco.	T.	Mar rizada.
		M.	Mar moderada.
o	Cubierto.	H.	Mar gruesa.
p	Lluvia pasajera.	R.	Mar alborotada.

NOTA.—Un ° ó un ² puestos como exponentes de los signos, indican respectivamente una muy débil ó una muy fuerte intensidad en el meteoro que representan.

BULLETIN FOR JANUARY, 1910.

METEOROLOGICAL BULLETIN FOR JANUARY, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The monthly mean of atmospheric pressure is slightly higher than that of January, 1909, in Luzon, and slightly lower in the Visayas and Mindanao. The mean for Manila differs from the normal of this month by —0.91 millimeter. The highest pressures were observed, with a very few exceptions, everywhere on the 27th, while the lowest pressures took place on the 11th in the Visayas and Mindanao and on the 13th in Luzon.

The monthly mean temperature is almost identical with that of the preceding year in the southern part of the Philippines and somewhat lower in the northern part. That of Manila is 0.6°C. below the normal for January. The maximum and minimum of the month as recorded at the Central Observatory were 32.8°C. and 17.4°C., respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS, JANUARY, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from January, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from January, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	757.73	—0.80	759.29	27	755.58	11	26.4	+0.5	31.9	5,9	21.5	5
Surigao	58.51	— .36	60.18	27	56.58	11	25.4	0	30.4	5	21.7	21
Cebu	58.52	— .43	60.35	27	56.59	11	26.1	+ .1	30.5	8	21.2	22
Iloilo	58.87	— .05	60.93	27	56.60	11	25.9	0	31.6	21	21.5	30
Ormoc	58.80	— .26	60.70	27	56.75	11	25.3	+ .4	32.5	13	19	22
Tacloban	59.21	— .31	61.06	27	57.19	11	----------	----------	31	14	22.1	22
Calbayog	59.52	— .25	61.48	27	57.49	11	24.9	+ .1	32.2	13	19.5	22, 23
Legaspi	59.88	+ .04	62.03	27	57.68	13	25.5	— .3	31.1	14	19.8	30
Atimonan	60.36	+ .36	63.07	27	57.77	13	25.5	0	29.8	4	22.1	14
Manila	60.16	+ .26	62.42	27	57.61	13	24.4	— .3	32.8	10	17.4	30
San Isidro	60.27	+ .42	62.74	27	57.58	13	----------	----------	----------	----------	----------	----------
Dagupan	60.02	+ .33	62.25	27	57.47	13	25.3	— .6	35.3	11	17.8	8
Bolinao	59.92	+ .44	62.01	27	57.28	13	25.2	— .9	32.2	10	18.8	18
Baguio[2]	637.08	----------	638.88	4	635.21	13	16.6	----------	25	8,11	10.1	30
Vigan	760.17	+ .27	762.30	25	757.58	13	25.5	— .3	34.6	3	17.7	26
Tuguegarao	61.74	+ .94	65.25	27	57.99	13	23.5	— .8	32.4	13	16	8
Aparri	62.25	+ .92	65.67	27	58.04	13	23.2	----------	31	13	17.6	18

[1] The barometric readings of this station seem to be too low. [2] The barometer of this station is not reduced to sea level.

Precipitation.—By examining the table below we find that the great majority of our stations reparted a monthly amount of rainfall greater than in January, 1909, especially in the Visayan Islands and northern Mindanao. In Manila the water collected at the observatory during the month falls short of the normal of January by —21.4 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF JANUARY, 1910.

Station.	Total.	Departure from January, 1909.	Rainy days.	Departure from January, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from January, 1909.	Rainy days.	Departure from January, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	117.3	−112.3	11	− 2	46.2	13	Sumay, Guam	63.4	+ 8.2	16	− 3	11.4	1
Isabela, Basilan	43.9	− 12.8	11	− 5	12.2	13	Calapan	81.8	− 98.6	18	− 2	18.8	19
Zamboanga	54.8	− 3.1	8	0	15.2	23	Virac	190	+ 53.7	22	+ 2	33.6	19
Davao	160.5	------	9	------	36.3	13	Nueva Caceres	105.8	------	14	------	40.1	20
Cotabato	144.9	− 64.2	15	− 2	22.9	26	Batangas	3.6	− 6.7	7	− 1	1.1	4
Cagayan, Misamis	32.2	+ 12.9	8	+ 3	7.6	22	Atimonan	86.8	−381.8	16	− 4	24.1	20
Butuan	264.9	+112.2	28	+ 7	38.1	14	Silang	15.3	− 63.8	5	0	5.6	20
Yap, W. Carolines	171.9	+ 25.8	24	+ 7	42.9	30	San Antonio, Laguna	157.8	− 68.7	18	− 1	31.8	4
Tagbilaran	163	+114.9	14	− 3	49.3	19	Manila	6.2	− 40.6	3	− 6	4.8	24
Surigao	615.7	+264	26	+ 1	52.6	16	San Isidro	10.8	− 24.1	5	+ 2	4.1	4
Maasin	241.8	+145.3	12	+ 2	49.5	18	Tarlac	.8	− 14.9	1	− 2	.8	24
Cebu	118.1	+ 71.9	12	+ 2	31.7	19	Baler	35.9	------	15	------	9.6	1
Iloilo	25	+ 6.6	10	+ 4	7.6	27	Dagupan	35.8	+ 25.4	5	+ 3	19	21
San Jose Buenavista	15.1	+ 3.7	6	+ 4	8.4	30	Bolinao	.5	− 25.1	1	− 3	.5	22
Ormoc	127.2	+ 6.6	20	+ 2	21.6	19	Baguio	45.8	+ 41.8	5	+ 2	19.6	21
Tacloban	339.6	+151.1	28	+10	61.9	19	San Fernando, Union	24.7	+ 24.7	4	+ 4	23.1	21
Capiz	79.2	------	10	------	16	19	Echagüe	44.4	+ 26.6	11	+ 1	15	4
Borongan	797.9	+485.4	29	− 1	167.9	27	Candon	3.6	+ 3.6	3	+ 3	1.3	2, 20
Calbayog	157.8	+ 56.6	23	+ 4	36.1	19	Vigan	0	− .5	0	− 1	0	0
Masbate[1]	279.5	------	19	------	94	19	Tuguegarao	31.5	+ 28.2	4	+ 2	17.8	5
Romblon	219.4	+168.2	17	+ 1	55.3	19	Laoag	0	0	0	0	0	0
Laoang	768.4	+344	28	− 1	212	20	Aparri	109.8	− 53.4	14	− 3	29.7	22
Gubat	218.5	+ 30	21	+ 6	49.5	19	Sto. Domingo	125.2	− 47	21	− 2	25.9	17
Legaspi	636.5	+372.2	26	+ 4	161.4	19							

[1] 30 days of observation only.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La media mensual de la presión atmosférica es un poco más alta que la de Enero de 1909 en Luzón, y algo más baja en Visayas y Mindanao. La media de Manila difiere de la normal de este mes en —0.91 milímetros. Las máximas presiones se observaron casi en todas partes el 27, mientras que las mínimas presiones tuvieron lugar el 11 en Visayas y Mindanao, y el 13 en Luzón.

La temperatura media mensual apenas se diferencia de la del año anterior en la parte meridional de Filipinas, y es algo más baja en la región septentrional. La de Manila se aparta de la normal de Enero en —0.6°C. La máxima y mínima del mes observadas en el Observatorio Central fueron 32.8°C. y 17.4°C.

Precipitación acuosa.—Examinando la tabla de lluvia que acompaña el texto inglés, hallamos que gran parte de nuestras estaciones nos dan un total de lluvia superior al de Enero de 1909, especialmente en las Islas Visayas y N de Mindanao. En Manila el agua recogida en los pluviómetros del Observatorio durante todo el mes difiere de la normal de Enero en —21.4 milímetros.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Maximum.	Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Shelter, total.
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	759.10	25.2	30.8	21	26	27.2	26.5	26.6	27.2	27.9	84.1	19.9	3	2.1
2	60.09	25.1	30.5	21.2	26.2	27.4	26.6	26.8	27.4	27.8	82.3	19.3	2.9	1.8
3	61.49	24.7	29.2	21.1	26.3	26.9	26.8	26.8	27.3	28	81.1	18.6	2.9	2.2
4	61.68	25.3	31.2	21.7	26.1	27	26.8	26.8	27.3	27.9	84.4	20.1	2.6	1.9
5	61.11	25.6	31.5	21.8	26.3	27.2	26.7	26.9	27.3	27.8	75.8	18.3	4	3.2
6	60.31	25.1	32.2	20	25.9	27.1	26.7	26.9	27.2	27.8	78.2	17.1	4.7	3.7
7	59.38	24.9	31	20.3	25.9	26.9	26.6	26.9	27.2	27.7	69.8	15.8	5	4
8	58.86	24.4	31.8	17.8	25.3	26.8	26.7	26.8	27.2	27.8	73.7	16.4	4.2	3.2
9	58.67	25.7	32.4	21.6	25.8	27	26.4	26.9	27	27.7	75.1	18	5.2	3.9
10	58.72	25.5	32.8	20.4	25.9	27.2	26.6	26.8	27.2	27.7	72	17	4.8	3.8
11	57.88	24.9	31.2	19.9	25.6	26.9	26.5	26.7	27.3	27.6	74.5	17.2	4	3.2
12	58.21	24.7	31.2	19.8	25.7	26.9	26.6	26.8	27.2	27.4	77.8	17.9	3.4	2.6
13	57.61	24.1	31.1	19.2	25.4	27	26.5	26.8	27.2	27.4	77.2	17	4.5	3.4
14	58.15	23.9	30.3	18.6	25.3	26.9	26.4	26.7	27.3	27.5	77.1	16.8	3.7	3
15	59.41	24.4	31.2	19.3	25.3	26.8	26.3	26.4	27.2	27.5	74.4	16.5	4.8	3.6
16	60.35	24.1	29.6	20.2	25.5	26.5	26.3	26.5	27.1	27.3	76.5	16.7	3.5	2.9
17	60.16	23.6	30.4	18.8	25	26.8	26.2	26.5	27.1	27.4	75.7	16.1	3.7	2.9
18	59.85	23.2	29.8	17.5	24.8	26.5	26.1	26.4	27	27.3	76.6	16	3.7	2.6
19	60.62	24.7	29.9	20.7	25.2	26.2	26.2	26.2	27.2	27.5	75.2	17.2	3.8	3.1
20	61.15	24	27.5	21.3	25.2	26.1	26.1	26.2	27.1	27.4	81.5	18	1.9	1.7
21	60.49	25.2	31.3	20.3	25.2	26.5	26.1	26.4	27.1	27.3	80.5	19	3.2	2.3
22	60.63	25.9	32.1	22.3	25.8	28	26.3	26.7	27.2	27.5	80.3	19.7	4.1	3.1
23	60.93	25.3	30.4	21.5	26.1	27.4	26.6	26.7	27.2	27.4	75.7	17.9	3.8	2.9
24	60.95	24.1	30.2	20.4	25.7	27.1	26.5	26.7	27.1	27.4	83.3	18.5	2	1.9
25	61.03	24.5	30.9	20.3	25.6	27.1	26.4	26.7	27.1	27.3	79.6	17.9	4.2	3
26	61.43	23.9	29.2	20.6	25.6	27	26.4	26.5	27	27.3	76.9	16.8	3.4	2.6
27	62.42	23.1	29.4	19.3	25	26.1	26.1	26.5	27	27.3	75	15.5	3.8	3
28	61.98	22.5	29.5	18.5	24.4	26.5	25.9	26.2	27	27.3	75.8	15.2	3.6	2.8
29	60.59	22.6	29.2	17.7	24.7	27.1	25.9	26.4	27	27.2	78.3	15.8	3.9	3
30	60.79	23.2	29.4	17.4	24.7	27	25.9	26.4	27	27.3	76.2	15.9	4.3	3.1
31	60.93	24.5	30.6	19.9	25.1	26.8	26.1	26.4	27	27.3	71	15.8	6.7	5.1
Mean	760.16	24.4	30.6	20	25.5	26.9	26.4	26.6	27.2	27.5	77.1	17.4	3.8	3
Total													119.3	91.6
Departure from normal	—0.91	—0.6	+0.6	—0.4							—0.8	—0.8		

Date.	Wind. Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Prevailing form and its direction. Upper.		Lower.		Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0–10.*					*h.* *m.*	*mm.*	
1	Variable	104.5	11.5	E	4.4	A.-Cu.		Cu.	E	7 30		☊° ≡ a. ☐ ●° p.
2	ESE	103.5	15	WbyN	4.4	A.-Cu.	E	Cu.	ENE	8 15		≡ a.
3	E quad.	75.5	14	EbyS	7.4	A.-Cu.		S.-Cu.	E	3 30		d p.
4	N quad.	118.5	14	ESE	7.2	A.-Cu.	E	Cu.	ENE	4 15		≡ d° a.
5	ESE	156.5	24	E	4.7	A.-Cu.		Fr.-Cu.	EbyN	7 30		≡ a.
6	E, NNE	234.5	19.5	E	6.3	Ci.	SEbyS	Cu.	E	5 25		≡ a.
7	E quad.	217	24	ESE	2.1	Ci.		Cu.	E	8 55		≡ a. p.
8	NE quad.	174.5	16.5	E	3.4	A.-Cu.		Cu.	ESE	9 15		≡ a.
9	E	195.5	23	ESE	4.8	Ci.		Cu.	E	8 20	0.6	≡° ●° a.
10	E	157.5	18	E	3.3	Ci.		Cu.	E	9 00		≡ a.
11	ENE, W	116	15	WNW	3.2	Ci.		Cu.	E	8 30		≡ a.
12	NNE	120	14	NW	5.4	A.-Cu.		S.-Cu.	E	6 05		≡ a. d p.
13	SE	165.5	17	SE	2.9	Ci.		Cu.	ENE	7 50		≡ a.
14	E quad.	160	18	WNW	5	Ci.		Cu.	NE	8 10		≡ a.
15	NE quad.	162.5	23.5	ENE	6.5	Ci.		Cu.	EbyN	7 40		≡° a.
16	E, ENE	111	15.5	E	6.8	Ci.		Cu.	E	5 00		☊ ≡ a.
17	ENE, W	114	16	WbyS	3.7	Ci.		Cu.	E	7 30		≡ a.
18	W quad.	92	14	W	3.1	Ci.-S.		Cu.	E	6 45		☊² ≡ a.
19	Variable	86	13	NW	7.3	Ci., A.-Cu.		S.-Cu.		4 00		≡ a.
20	NE	34.5	9	NE	9.8	Ci.-S.		S.-Cu.	E	0 15	.8	≡° d a. ●° p.
21	NNE	101.5	11.5	ENE	8.2	Ci.-S.		S.-Cu.	ESE	5 20		≡° a.
22	SE	170.5	18	ESE	6.1	A.-Cu.		Cu.	E	8 00		≡° a. d° ⌒° p.
23	SE	142	13	ESE	7.8	A.-Cu.	SE	Cu.	E	3 35		≡° a.
24	ENE	72.5	8	WbyS	7.3	A.-Cu.		Cu.-N.	E	3 45	4.8	≡° a. ●² p.
25	N quad.	195.5	17	NNE	6.8	Ci.		Cu.-N.	NEbyN	7 30		≡° a.
26	N	165	19	NE	6.5	Ci.		Cu.	E	5 20		≡° a.
27	N	135	15	SE	5.4	Ci.		Cu.	E	6 10		≡° a.
28	W quad.	148	14	WSW	6.4	A.-Cu.		Cu.	ENE	5 15		≡° a.
29	ESE	163	15	W	3.5	Ci.		Cu.	E	8 00		≡ a.
30	W quad.	151.5	17	W	4.1	Ci.		Cu.	EbyN	6 40		≡° a.
31	NE quad.	281.5	29	NE	6.2	Ci.		Cu.	NE	7 30		≡° a.
Mean		142.7	16.5		5.5					6 29		
Total										200 45	6.2	
Departure from normal		—25.5			+ 0.3					+ 7 22	—21.4	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.15	26.3	30.6	23	81	N quad.	1.8	6.2	Ci.-S.	Cu. E	------	
2	58.11	26.1	30.5	22.1	79	N quad.	1.7	8.2	A.-Cu.	Cu.-N. E, NE	7.6	
3	59.22	26	28.7	23.1	85.8	NNE	1.2	9.2	Ci.-S.	Cu.-N. E	8.4	● a. p.
4	58.88	26.4	31.3	22.4	79.3	NNE	1.7	7.2	Ci.-S.	Cu.-N. NNE	------	
5	58.63	26.7	31.9	21.5	78.3	NNE	1.7	7.7	Ci.-S. SE	Cu.-N. E	------	
6	57.45	27	31	23.3	76.2	NNE	1.5	8.2	Ci.-S. SW	Cu.-N. NE, E	------	
7	56.57	26.2	29.7	23.8	80.4	NE quad.	1.3	9	Ci.-S.	Cu.-N. ENE	5	● p.
8	56.44	26.5	30.6	22.3	78.2	NNE	1.2	7.2	Ci.-S.	Cu.-N. E	------	
9	56.22	26.6	31.9	23.4	79.7	N, SE	1.5	7	Ci.-S.	Cu.-N. E	------	
10	56.38	27.1	31.4	23	73.2	NNE	1.8	7.2	Ci.-S.	Cu. E	2.3	● p.
11	55.58	26.9	30.7	23	78.9	NNE	1.7	7.7	Ci.-S.	Cu.-N. E	.8	d a.
12	55.75	26.9	30.3	23.4	82.6	NNE	1	9.2	Ci.-S.	Cu.-N. E	------	
13	55.88	26.6	31	22.1	79.2	N, NNE	1.5	8.3	Ci.-S. SE	Cu.-N. E	------	
14	56.32	26.4	31	23	80.9	NNE	1	9.8	Ci.-S.	Cu.-N. E, NE	1.6	d p.
15	57.09	26.4	31	23.2	78	N quad.	1.5	7.8	Ci.-S.	Cu.-N. NE	------	
16	57.91	26.6	29.8	22.3	76.1	NNE	1.7	7.7	Ci.-S.	Cu.-N. NE	.3	
17	57.39	26.7	29.4	22.8	79.3	N, NE	1.3	9.7	A.-Cu.	Cu.-N. NE	1.3	d a.
18	56.97	26.4	30.8	23.4	83.7	NW	1.2	9	Ci.-S.	Cu.-N. NE	12.5	● p.
19	57.55	26.1	30.3	23.1	85.3	WNW, NNW	1.2	9.3	Ci.-S.	Cu.-N., N. NE	49.3	d a. ● p.
20	58.73	26.3	30.4	22.7	85.2	NW quad.	1.5	9.5	Ci.-S.	Cu.-N. NE, E	18.6	● p.
21	59.04	25.7	30.8	22.1	85	N quad.	1.3	9	Ci.-S. SE	Cu.-N. NE	34.1	● ⊤[2] p.
22	59.17	25.8	30.6	22.3	82	NNE	1.7	10	Ci.-S. SW	Cu.-N. NE	.3	d° p.
23	59.24	26.2	30.5	22.5	75.8	N quad.	1.7	8.3	Ci.-S.	Cu.-N. NE	------	
24	58.85	26.8	31.5	22.3	76.5	NNE	1.5	8.5	Ci.-S.	Cu.-N. NE	------	
25	58.37	26.9	31.1	21.8	79.2	N quad.	1.3	8.5	Ci.-S.	Cu.-N. NE	1	d p.
26	58.61	26.4	29.5	23	82.5	N quad.	1.2	9.5	Ci.-S.	Cu.-N. NE	3.8	d a. ● p.
27	59.29	26.3	29.5	22.6	79.7	NNE	1.5	9.2	Ci.-S.	Cu.-N. NE	7.9	● a.
28	59	25.9	30.2	23.2	82	N quad.	.8	9.5	------	Cu.-N. NE	.8	d a. p.
29	57.91	26	30.2	24	77.5	N quad.	2.2	9.7	Ci.-S.	Cu.-N. NNE	------	
30	58.12	26.7	30.7	23.7	77.8	NNW	1.5	8.5	------	Cu., Cu.-N. NNE	------	
31	57.78	27	31.5	23.3	79.5	NNW, NNE	1.8	7.3	Ci.-S.	Cu. E	7.4	
Mean	757.73	26.4	30.6	22.8	79.9	------	1.5	8.5	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	163	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.16	26.1	30.3	23.2	86.8	NE	.6	6.2	Ci.	Cu. E	10.9	Ω[2] p.
2	58.65	25.1	27	23.2	90.8	NE, NNE	1.2	9	------	Fr.-N. E, NE	10.6	● a. p. Ω[2] p.
3	59.77	25.7	28.6	23.4	88.9	NE quad.	1.6	8.7	Ci.-S.	N.-cf. E	25.2	●[2] a. p.
4	60.02	25.7	30	23.4	89.5	Variable	.2	7.8	Ci. NE	Cu. E	2.5	● Ω[2] a. p. ≡° a.
5	59.66	26.3	30.4	23.7	84.7	NE quad.	.7	7.2	Ci. NE	Cu. E	48.5	Ω° ≡° a. ∞ ●[2] p.
6	58.45	26.1	29.9	23	86.8	ENE	1	9.2	Ci. NE	Fr.-N. E	11.4	∞ a. p.
7	57.30	25.6	26.8	24.1	89.2	ENE	1.3	7.5	Ci., A.-Cu.	Fr.-N. E	42.6	●[2] a. p.
8	57.07	25.9	28.5	23.6	90	NE quad.	.8	7.8	Ci.	N.-cf. ENE	8.8	Ω° ● a.
9	56.99	26.4	29.7	24.3	86.8	EbyN	.7	7	Ci.-S.	N.-cf., Cu. E	3	Ω° a. ● p.
10	57.17	26.4	29.7	23.6	83.2	ENE	.8	6.3	Ci.	Cu. NE	38.8	Ω° a. ● p.
11	56.58	26.1	28.9	23.5	89.1	ENE	1.8	8.8	------	Fr.-N. E	14	● a. p.
12	56.80	26	28.5	24.1	87.4	ENE	1.9	8	A.-Cu.	Fr.-N. E	7.4	● a.
13	56.90	26.6	29.7	23.8	81.8	ENE	1.8	6.2	A.-Cu. NE	S.-Cu. E	16.2	∞ d° p.
14	57.19	24.4	27.3	23	92.7	ENE	1	10	------	N.	24.9	● a. p.
15	58.07	25.7	29.5	22.1	85.3	NE	1.3	6.8	A.-Cu. N	Cu. NE	------	Ω[2] a. ∞ p.
16	58.53	25.5	28.1	24.1	87.8	ENE	1.8	7	------	Fr.-N., S.-Cu. E	52.6	Ω° ● a. p.
17	58.01	25.2	29.1	23.1	89.5	ENE	.7	8.8	A.-Cu.	Fr.-N. ENE	14.2	●[2] a. ●° p.
18	57.90	25.1	29.2	22.5	92.3	ENE	.5	8.8	------	Fr.-N. NE	10.9	d a. ● p.
19	58.47	24.8	29	23.4	94.2	NE	1.3	9.2	Ci.-S.	Fr.-N. NE	36.3	● a. p.
20	59.42	25.6	29.4	23.3	90.3	NE, ENE	.5	9	Ci.-S.	Fr.-N., N.-cf. NE	------	● a.
21	59.66	24.8	28.8	21.7	92.3	Calm	--------	6.5	Ci.-S.	S.-Cu., Cu. NE	7.9	Ω[2] a. ● p.
22	59.77	24.5	28	22.8	91.7	E	.2	8.3	Ci.-S., Ci.	Cu. NE	50.5	Ω[2] a. ● p.
23	59.66	24.3	27.5	22.3	91.7	Variable	.5	10	------	Fr.-N. NE	21.1	● a. p.
24	59.22	24.5	28.4	22	91	NW, SW	.3	7.2	Ci.,Ci.-S. N	Cu. NE	2.3	● a. p.
25	59.32	24.7	27.2	21.8	90.5	NW	.8	8.3	A.-Cu. N	N.-cf. NE	10.9	● a. p.
26	59.43	25.2	28.4	23.4	87.7	NNW	.7	8.7	A.-Cu. N	N.-cf. NE	15.7	● a. p.
27	60.18	25.2	28.4	22.4	88.8	NW	.8	8.5	Ci.	Fr.-Cu., N.-cf. NE	17.6	● a.
28	59.53	25.1	28.1	23.1	90.8	NNW	.5	9.2	A.-Cu.	N. NE	48.7	● a. p.
29	58.51	24.8	28.8	23.8	93.8	NNW	1.8	9.3	A.-Cu. N	Fr.-N. NE	35.3	● a. p.
30	58.77	25.3	27.6	23	91.3	NW	.7	7	A.-Cu. N	Cu. NE	------	∞ Ω p.
31	58.64	26.1	29.7	23	85.2	NE	1.3	7	Ci.	Cu. ENE	26.9	Ω d a. ●[2] p.
Mean	758.51	25.4	28.7	23.2	89.1	------	.9	8	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	615.7	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.01	26.6	29.9	23.2	68	NE quad.	9.6	2.3	Ci.	Cu. ENE	------	☊ a.
2	58.64	25.3	28	22.3	74	NE	7.8	5.5	Ci.-S.	S.-Cu. ENE	1.8	☊ ● a.
3	59.81	26.2	29.1	23.7	72.2	NE quad.	11.8	6.5	Ci.-S.	Cu.-N. ENE	1.1	☊ a. ● d p.
4	60.07	26.6	30	24	72.4	NE quad.	9.7	5.3	Ci.	Cu. ENE	5.3	☊ a. ● p.
5	59.79	26.3	30	22.9	74.2	NE quad.	11.9	4.8	Ci.	Cu. ENE	14.8	● a. p.
6	58.46	26.4	29.3	23.7	72.8	NE	9.9	6.8	Ci.-S.	Cu.-N. ENE	.3	d ☊ ● a.
7	57.24	26.5	29.9	24.4	70.7	N, E	11.6	4.3	Ci.	Cu. ENE	------	d a
8	57.15	26.7	30.5	23.5	69	N, NE	10	6	Ci., Ci.-S.	S.-Cu., Cu. ENE	------	☊ a. d p.
9	57.07	26.3	29.4	24.2	72.8	NE	10.7	4	Ci.	Cu. E	------	☊ a.
10	57.14	26.6	29.5	23.3	68.2	NE	11.3	3.7	Ci.	Cu. ENE	1.3	☊ a.
11	56.59	26.2	29	23.4	75	NE	11.9	4.8	Ci.-S., Ci.	Cu.-N. ENE	------	● a.
12	56.86	26.4	29.2	24.5	73.8	NE	8.8	6	Ci.	Cu. ENE	.3	☊ a. d a. p.
13	56.88	25.7	28.9	21.6	70.8	NE	9.4	2.5	Ci.	Cu. ENE	------	☊ a.
14	56.88	26.1	28.8	22.7	72.4	E	7.7	3.8	Ci.	Cu. ENE	30.2	☊ a.
15	58.05	25.2	29.5	23	76.4	N, NE	8.6	6.5	Ci.-S., A.-Cu.	Cu.-N. ENE	3.6	●² a.
16	58.49	26	28.9	23.7	70.1	NE	9.8	3.8	Ci.	S.-Cu., Cu. ENE	------	☊ a.
17	57.92	26.6	29.6	23.5	67	NE	12.3	5.8	Ci., Ci.-S.	S.-Cu. ENE	------	☊ a.
18	57.74	26.3	29.8	23.9	71.2	ENE	10.8	6.2	Ci.	Cu. E	11.9	☊ a. ● p.
19	58.54	26	29.6	22.5	74.7	NE quad.	9.2	5.2	A.-Cu. E.	Cu.-N. NE	31.7	☊ a. ● d p.
20	59.72	26.2	29.6	22.5	76.3	NE quad.	7.7	7.3	Ci.-S., Ci.	Cu. ENE	3.8	●² a ☋ p.
21	59.59	25.6	30	23.3	75.3	NE	7.9	6.2	Ci., A.-Cu.	Cu. ENE	.5	☊ a d p.
22	59.58	25.6	29.5	21.2	72	N, E	7.3	5.5	Ci.-S.	Cu. NE	------	☊ a.
23	59.56	26.1	30	23.9	64.2	NE	10.3	3.8	Ci.-S.	Cu. E	------	☊ a.
24	59.30	26.1	29.9	22.3	68.8	NE	9.1	3.8	Ci.	Cu. ENE	------	☊ a.
25	59.16	26.2	29.8	22.2	69.7	NE	10.4	3	Ci.	Cu. ENE	------	☊ a.
26	59.41	26.4	30	23.9	67.2	NE quad.	11.8	5.5	A.-Cu.	Cu. ENE	------	☊ a.
27	60.35	26.2	29	23.7	68.4	NE	10.9	4.7	Ci.	Cu. NE	.8	☊ a.
28	59.90	25.5	30	23.5	73.1	NE	11.3	6.8	A.-Cu.	Cu. NE	------	●° d a.
29	58.61	26	29.8	23.5	65.1	NE	10.6	4.5	Variable	Cu., S.-Cu. NE	------	☊ a.
30	58.83	26.4	29.9	23.6	67.2	NE	7.8	4	Ci.	Cu. ENE	------	☊ a.
31	58.64	26.1	30	22	69.3	NE quad.	11.6	4	Ci.	Cu. ENE	10.7	☊ a. d p.
Mean	758.52	26.1	29.6	23.2	71	----------	10	4.9	----------	----------	------	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	118.1	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*				*mm.*	
1	758.18	26.9	31.5	24	76.7	NE	13.9	3.2	A.-Cu. E	Cu. NE	------		☾ p.
2	58.79	26.2	31	23	81.7	NE	13.7	5.8	A.-Cu. E	Cu. NE	------		d ⌒ a. ☾ p.
3	60.08	26.4	29.9	23.4	80.7	NE	17.6	5.7	A.-Cu.	Cu. NE, ENE	.5		● p.
4	60.16	27.3	31.2	24	78	NE	13.6	5.3	A.-Cu.	Cu. NE	------		
5	59.78	26.6	30.9	23.5	78.3	NE	15.8	5	Ci.	Cu. NE	4.6		⌒ a. ● a. p.
6	58.67	26.7	30.5	23.6	76.5	NE	17.5	5.5	A.-Cu.	Cu. NE	------		☾ p.
7	57.80	25.4	28.8	23.4	85.6	N, NE	16.4	5.3	Ci.-S.	Cu. ENE, N	2.3		● a. p.
8	57.56	26	30.5	22.4	80.3	N, NE	15.8	6.5	Ci.-S.	Cu. NE	------		
9	57.07	26.6	30.5	24	79.2	N, NE	14.6	5.8	A.-Cu.	Cu. ENE, ESE	------		
10	57.34	26.2	30.5	23.4	80.2	NE	17.7	5.3	Ci.-S.	Cu. NE	------		☊² a. d p.
11	56.60	26.7	31	23.9	79	N, NE	17.6	4.5	Ci.-S., Ci.	Cu. NE	------		d p.
12	57.09	26.5	30.5	23.9	80.7	NE	17	6.2	Ci., A.-Cu.	Cu. N	1.5		● p.
13	56.91	25.9	30	22.6	77.2	NE	16.7	5	Ci.	Cu. NE	------		
14	57.29	25.8	30.5	22	76.6	NE quad.	13	5.8	Ci.-S., Ci.	Cu. N	------		
15	58.35	25.5	28.5	23	77.7	NE	17.7	5.7	Ci.-S.	Cu. NE, ENE	------		d a. p.
16	58.85	26	31	22.6	75.7	NE	18.2	4.5	Ci., Ci.-S.	Cu. NE	------		
17	58.65	25.7	30.2	23.1	80.2	NE	18.3	4.7	Ci.-S.	Cu. NE	------		d a. p. ⌒ p.
18	58.41	25.5	29	23.6	82	NE	17.6	5.8	A.-Cu.	Cu. NE	.8		● d p.
19	58.98	25.4	30.5	22.9	84.7	NE	16.8	7.2	A.-Cu.	Cu. NE	3.1		● d p.
20	59.91	25.8	30.4	23.4	84.9	NE quad.	12.2	8.8	A.-Cu.	Cu.	.8		d ● a.
21	59.64	26.6	31.6	23	80.2	NE	14.4	6.3	A.-Cu. E	Cu. NE	------		☊
22	60.11	25.8	30.7	22.5	78.7	NE quad.	14.9	5.8	Ci.-S.	Cu. NE, N	------		
23	59.92	26	30.1	22.2	72.2	NE	16.1	4.3	A.-Cu. E	Cu. NE	------		
24	59.84	26	31	22	75.5	NE	13.9	4.7	Ci.	Cu. ENE	------		d p.
25	59.72	26	30.3	22.6	79.1	NE	13.6	6.3	A.-Cu.	Cu. N	------		d p.
26	59.92	25.5	30	22.8	79.7	NE	16.4	5.7	A.-Cu. E	Cu. NE	------		d p.
27	60.93	24.3	29.4	22.4	86.5	N, NE	17	7	A.-Cu., Ci.-S.	Cu.	7.6		d ● p.
28	60.47	24.6	29.4	22.2	85.2	NE	15.7	7.3	Ci.-S.	Cu. NE	------		d a. p.
29	59.42	25.2	30.4	22	75.3	NE	17.3	5.5	Ci.-S.	Cu. NE	------		
30	59.51	24.8	30.1	21.5	81.2	NE	13.8	6.5	A.-Cu.	Cu. NE	.8		d ● p.
31	59.08	25.6	30.5	23	84	N, NE	16.5	4.8	Ci., Ci.-S.	Cu. NE	3		d a. ● p.
Mean	758.87	25.9	30.3	23	79.8	----------	15.8	5.7	----------	----------	------		
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	25		

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.31	25.4	32	20.8	77.8	Variable	---	4.3	Ci., Ci.-S.	Cu. E	---	☌ ≡° a.
2	58.85	24.9	29.7	21.3	84.3	NE quad.	---	7.7	Ci.-S.	Cu.-N. E by N	2.8	≡° ● ° a. ↙ p.
3	59.95	25.7	31.6	22.4	78.8	NE quad.	---	8.3	Ci.-S. S	Cu.-N. E	3.5	≡° a. ⌒ ² ⌐ d ↙ p.
4	60.16	26.2	30.6	22	80.2	Variable	---	5.7	A.-Cu. E, ENE	Cu.-N. E	3.4	d ≡° a. ↙ p.
5	59.80	25.8	30.4	22.3	80.8	NE quad.	---	6.8	Ci.-S. E	Cu. E	1.1	d° ≡° a. ● ° ⌒ ↘ p.
6	58.61	27.1	32.2	23.1	70	NE quad.	5.8	8.5	Ci.-S.	Cu.-N. E	---	≡° a. ↙ p.
7	57.59	26.3	30.8	23	72.8	Variable	6.8	6.5	A.-Cu. E by S	Cu.-N. NE by E	---	≡° a ↙ a. p.
8	57.46	26.1	32.2	21.7	78.7	N, ENE	5.7	8.7	A.-Cu. E	Cu.-N. E	2.5	☌ ≡° d° a. d° ↙ p.
9	57.40	25.7	31.2	22.8	82.8	NNE, SE	5.8	8	Ci.-S.	Cu.-N. E	1.3	d ≡° ● ° a. d° ⌒ p.
10	57.38	27	30.6	23.2	72	NE quad.	6.7	6.2	Ci.-S., A.-Cu.	Cu.-N. E	.8	≡° a. d° p.
11	56.75	26.1	30.2	23	79.2	NE quad.	6	7.5	Ci.-S.	Cu.-N. E	.8	☌ ≡° a. d° p.
12	57.17	26	29.4	21.4	76.7	NE	6.2	8.5	Ci.-S.	Cu.-N. E	---	≡ a.
13	57.08	25.5	32.5	20.9	75.5	NE quad.	6.4	4.5	Ci.	Cu. E	---	☌ ° a.
14	57.26	25	31	19.8	80.5	Variable	4.9	7.8	A.-Cu. ESE	Cu.-N.	5.1	☌ ≡° a. d p.
15	58.37	25.6	31	22.2	79	NE quad.	5	7.8	Ci.-S.	Cu.-N. NE	1.3	d a.
16	58.79	25.8	31.3	20.9	74.7	N	6.4	5.5	A.-Cu. E	Cu. ENE	---	☌ ≡° a.
17	58.44	25.5	30.4	22.7	84	N	4.6	9.7	Ci.-S.	Cu.-N. NE	---	≡° a.
18	58.09	24.8	29.6	21.9	89.8	Variable	4.3	7.5	A.-Cu. E	Cu.-N. N, NE	19.8	● ≡° ⊤ ☋° p.
19	58.85	24.9	29	22	89.7	Variable	3.9	9.3	A.-Cu. E	Cu.-N. E, ENE	21.6	● ≡° a. ● ⊤ ° p.
20	59.92	24.8	28	22.8	92	N quad.	3	9.8	A.-Cu. E	Cu.-N. E	8.4	● ≡° a. ⊤ ° d p.
21	59.92	24.2	27.8	21.6	92.7	N quad.	3.5	8.3	Ci.-S.	N. ESE	8.6	☌ ≡° a. ● p.
22	59.98	23.7	29.7	19	87.4	Variable	4.6	8	Ci.-S.	Cu. ENE	---	☌ ² ≡° a.
23	59.84	25.3	32	20	72.9	NE quad.	5	4.3	Ci.	Cu. NNE	---	☌ ≡° a.
24	59.64	24.2	29.4	19.6	88.5	N	3.8	8.7	Ci.-S.	Cu.-N. NNE	12.8	≡ a. p ● ⊤ ° p.
25	59.64	24.4	29.8	21.2	87	N	3.8	8.2	Ci.-S.	Cu. ENE	12.4	d ☌ a. ● ° p.
26	59.70	25.5	30.6	21.4	80.7	N quad.	5.2	7.5	A.-Cu.	Cu.-N. ENE	---	● ≡° a.
27	60.70	24.2	28.3	22.1	90.4	N	4.2	10	Ci.-S.	Cu.-N. NNE	8.6	≡° d° a. ● p.
28	60.12	24.4	27.2	22.2	88.2	NW quad.	5.2	8.3	Ci.-S.	Cu.-N. NE	5.3	≡° a ● ° a. p. ⌒
29	58.99	24.6	28.5	22.1	84.5	NW quad.	8.1	8.5	Ci.-S.	Cu.-N. NNE	---	≡° a. p. ⌒ p.
30	59.18	24.5	28.2	21.8	87.7	NNW	5.1	8.3	A.-Cu.	Cu.-N. N, NW	1.5	≡° a. d ⌒ p.
31	59.01	24.9	31	20.8	82.3	N	4.9	7.5	Ci., A.-Cu.	Cu.-N. NE	5.6	☌ ≡° d° a. ● ⌒ p.
Mean	758.80	25.3	30.2	21.7	82	---	5.2	7.6	---	---	---	
Total	---	---	---	---	---	---	---	---	---	---	127.2	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.72	---	30.5	24	---	Variable	.7	4.7	Ci.	Cu. E	7.9	
2	59.46	---	28.5	23.3	---	NE quad.	.8	7.5	Ci.	Cu.-N. E	9.4	● a.
3	60.49	---	29.5	24.5	---	NE quad.	1.2	8.2	Ci.-S., Ci.	N., Cu.-N. ENE	6.6	☋ ² a ● a. p.
4	60.61	---	30.2	24.6	---	E	1.2	6.8	Ci.-S.	Cu.-N. E	8.2	d a. ● p.
5	60.40	---	30.4	24.7	---	NW, E	.7	7.5	---	Cu.-N. E	5.6	● ⌒ a. d p.
6	59.30	---	29	23.4	---	NE	.7	8.5	Ci.-S. SW	Cu.-N. E	---	● a.
7	58.18	---	29.8	24.9	---	ENE	1.3	4.7	Ci.-S. SSW	Fr.-Cu., Cu.-N. E	1.3	● ° ⌒ ² p.
8	57.98	---	30.9	24	---	E	.7	6.2	Ci.-S. SW	Cu. E	10.2	● ° ⌒ ⊤ p.
9	57.88	---	29.3	24.8	---	SE quad.	1	7.8	Ci.-S.	N. E	7.3	● a. d p.
10	58.06	---	29.3	24	---	ENE	1	8.5	---	Cu.-N. E	12.5	● a. d ⌒ p.
11	57.19	---	30.3	24	---	Variable	1.2	6.5	Ci. W	Cu. E	3.6	● a. d p.
12	57.56	---	28.8	24.6	---	NW, NE	1	6.8	Ci.-S.	Cu.-N. E	.5	● ° a. p.
13	57.42	---	30.4	23.8	---	NE	.5	4.3	Ci.-S. SW	S.-Cu. ENE	---	
14	57.55	---	31	23.8	---	NW quad.	.5	7.3	Ci.-S. SW	Cu. E	14	● p.
15	58.86	---	28.8	23	---	N quad.	1	9	---	N., Cu.-N. NE	2	● d a.
16	59.17	---	29.8	23	---	NNW, SE	1	6.3	Ci.	Cu., Cu.-N. NE	18.3	☌ d a. ● p.
17	58.87	---	28.6	23	---	N, NW	1	8.7	Ci., Ci.-Cu.	N. NE	3.8	● d a.
18	58.49	---	29.7	23.7	---	N	.7	8.5	Ci.-S.	Cu.-N. NE	7.4	d a. ● p.
19	59.18	---	28.5	23.5	---	NW	.3	8.5	Ci.-S.	Cu.-N. ENE	61.9	● ² a. p.
20	59.97	---	29.8	23	---	NW quad.	.3	9	Ci. SW	N. ESE	13.3	● a p. ⌒ a.
21	60.36	---	27.5	23	---	Variable	.5	8	Ci.-S.	N. ENE	10.9	● a. p ☋ ² p.
22	60.22	---	28.5	22.1	---	NW	.8	6.2	Ci.-S. SW	Cu. NE	4.3	☌ ² a. d ● p.
23	60.22	---	30	23	---	N, ENE	.8	4.5	Ci., Ci.-S. SW	Cu. NE	---	
24	59.88	---	30	23	---	N	.5	8	Ci.-S.	Cu.-N. NE	6.8	☋ ² ● ° a. ● ⌐ ⊿ p.
25	59.77	---	30	23	---	NW	1	8.2	Ci.-S. SW	Cu.-N. NE	22.9	● a. p.
26	60.02	---	29.4	23.5	---	WNW, ESE	.5	8	Variable.	Cu.-N. NE	5.1	● a. p.
27	61.06	---	27	23	---	N	.8	10	---	N., Cu.-N. NE	46	● a. p.
28	60.48	---	27	22.3	---	N	.8	8.3	Ci.-S.	N. NE	14.3	● a. p ☋ ² p.
29	59.30	---	28.2	23.3	---	NNW	1	8.3	Ci.-S.	N., Cu.-N. N, NE	5.6	☋ ² a. ● a. p.
30	59.32	---	30.8	23.3	---	NNW	.8	7	Ci.-S.	Cu.-N. NNE	.8	● a. ⌒ p.
31	59.40	---	29.8	23.2	---	Variable	1	8	Variable.	Cu.-N. NE	29.1	☌ a ● a. p.
Mean	759.21	---	29.4	23.6	---	---	.8	7.4	---	---	---	
Total	---	---	---	---	---	---	---	---	---	---	339.6	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	-------	26.1	------	------	90.7	NE	0.3	4.8	Ci.-S.	Cu.-N. NE	------	≡° a.
2	-------	26.6	------	------	88	NE	1.2	6.3	Ci.	Cu. NE	9.7	● p.
3	-------	26.3	------	------	87	NE	1.2	8.2	Ci.-S. E	Cu.-N. NE	------	d° a.
4	-------	26.7	------	------	87.5	NE	.8	5	Ci.-S. E	Cu. E	------	≡° a.
5	-------	26.8	------	------	87	NE	1	6.5	Ci.-S. NE	Cu.-N. NE	------	d° a.
6	-------	27.2	------	------	86.2	NE quad.	1	5.8	Ci.-S. NE	S.-Cu. NE	4.3	
7	-------	26.4	------	------	85	NE	1.2	7.2	Ci. E	Cu. NE	------	● a.
8	-------	25.4	------	------	90.8	NE	.7	5.5	Ci.-S. E	Cu.-N. E	------	≡° Ω° a. d p.
9	-------	26.2	------	------	89.3	NE	.7	8.3	Ci.-S.	Cu.-N. NE	14.2	● a.
10	-------	25.9	------	------	88.3	NE	.8	6.3	Ci.-S.	Cu.-N. E	------	
11	-------	26.1	------	------	89.8	NE	1	6.8	Ci.-S. E	Cu.-N. E	2	● p.
12	-------	26.3	------	------	88.6	NE	.8	8.8	Ci.-S. E	Cu.-N. E	------	
13	-------	25.8	------	------	88.4	ENE, NE	.7	5.5	Ci.-S. E	Cu.-N. E	------	
14	-------	25.5	------	------	88.8	N	.7	5.3	Ci.-S. E	Cu.-N. E	------	Ω² a.
15	-------	26.1	------	------	87	NE	1.3	8.3	Ci.-S. E	Cu.-N. E	------	
16	-------	25.6	------	------	89.1	NE	1.3	9.2	Ci.-S. E	Cu.-N. E	------	d a.
17	-------	26.1	------	------	88.7	NNE, NE	2	8.5	Ci.-S. E	Cu.-N. E	------	d° p.
18	-------	25.9	------	------	88.7	N, NNE	2	9.3	Ci.-S. E	Cu.-N. N	15.5	● p.
19	-------	24.9	------	------	91.4	NE	2.3	9	Ci.-S. NE	N., Cu.-N. N	16	● a. p.
20	-------	25.1	------	------	93.3	NE	1.3	9.3	Ci.-Cu. E	Cu.-N. E	1.3	● a.
21	-------	26	------	------	89.2	SE, NE	.3	8	Ci.-S.	Cu.-N. E	------	
22	-------	25.6	------	------	88.8	NE	.7	5.7	Ci.	Cu.-N. E	------	Ω° a.
23	-------	25.8	------	------	89.7	NE	1	5	Ci.-Cu. E	Cu. E	------	┼ p.
24	-------	25.8	------	------	89.2	NE	1.2	6.5	Ci. E	Cu.-N. E	------	┼ d° p.
25	-------	25.9	------	------	88.2	NE quad.	1.3	7.5	Ci. E	Cu.-N. NE	------	⊽ p.
26	-------	25.4	------	------	92.7	NE	1.8	7.5	Ci.-S. NE	Cu.-N. NE	4.3	d a. p.
27	-------	24.3	------	------	90.5	NE	2.3	8.8	Ci.-S. NE	Cu.-N. ENE	------	
28	-------	25.3	------	------	89	NE	2	6.7	Ci.-S. E, NE	Cu.-N. NE	------	
29	-------	25.6	------	------	88	NE	1.7	6	Ci.-S.	Cu. E	------	
30	-------	24.7	------	------	91.8	N	1.8	8.7	Ci.-S. E	Cu.-N. E	11.9	● p.
31	-------	25	------	------	94	NNE	2.3	9	Ci.-S. E	Cu.-N. E	------	●° a.
Mean	-------	25.8	------	------	89.2	----------	1.2	7.2	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	79.2	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.86	25.4	31.1	22.2	88.5	N	1	3.7	Ci.	S.-Cu. E	1	Ω² a. d p.
2	59.69	25	29	22.1	90.7	NE quad.	1.2	5.7	A.-Cu.	S.-Cu. E	------	Ω² a.
3	60.78	25.7	30.7	21.5	85.3	NE quad.	1.2	5.2	A.-Cu.	S.-Cu. ENE	1.8	p° ⟋ p.
4	60.84	25.8	31.7	22.5	89.2	NE	.8	5.5	Ci.-S.	S.-Cu. E	------	d p.
5	60.54	25.9	32.1	23.1	88	E quad.	1	5.5	Ci.-S., A.-Cu.	S.-cf. E	3.8	d a. ● p.
6	59.60	25.5	29.9	22.7	87.8	NE	1.2	5.5	Ci.-S. SE	S.-Cu. E	8.8	Ω ≡° a. ● d ◠ p.
7	58.44	25.8	30.4	23.2	84.4	NE quad.	1.7	4	A.-Cu.	S.-Cu. NE, E	1.3	●° a. p. ◠° a.
8	58.19	26	30.7	22.4	86.7	N	1.3	6.2	Ci.-S.	S.-Cu. ENE	5.7	d a. p.
9	58.13	25.7	31	23.7	88.5	NE	1	5	A.-Cu. SE	S.-Cu. E	2.5	●° a.
10	58.43	24.6	29.2	22.3	90.7	NE	.8	5.5	A.-Cu., Ci.	N. E	8.7	Ω ≡ d a. ●° p.
11	57.49	25.7	31.6	22.7	85.7	N	1.3	3.3	Variable	S.-Cu. E	------	
12	57.88	25.2	31.5	21.9	86.8	N	1.3	5	A.-Cu. SE	S.-Cu. NE	------	≡ a.
13	57.66	25.2	32.2	20.7	82.5	N	1.2	1.7	Ci.	Cu. NE	------	Ω a.
14	57.72	24.7	30.7	19.8	86	NE	1.3	4.3	A.-Cu. SE	S.-Cu. NE	.8	Ω ≡ a. d p.
15	59.17	24.5	29.6	22	87.8	NE	1.5	7.2	A.-Cu. ENE	S.-Cu. NE	1.8	d a. p° p.
16	59.64	24.6	29.7	20.8	88	NE quad.	1.8	4.7	A.-Cu.	S.-Cu. E	1	Ω ≡° a. p° p.
17	59.18	25.2	29.4	23	89.3	NE	1.5	7	A.-Cu. ESE, SE	S.-Cu. NE	1.6	d p.
18	58.81	24.9	30	22.7	93.3	NE quad.	1.2	7.5	A.-Cu.	S.-Cu. NE	4.6	d ●° p.
19	59.60	24.6	29.2	22.4	94	Variable	.5	8.8	A.-Cu.	N. ENE	36.1	◠° ●° a. ● p.
20	60.38	23.6	25.2	22.8	96.5	NE	.8	9.3	A.-Cu.	N. ESE	26.1	d ● ┼ a. ● p.
21	60.58	23.9	26.8	21	94	N	1	7.5	A.-Cu. SE	N. E	3.3	●° a. p. ⊍ p.
22	60.60	24.2	30.1	19.5	86	N, NE	1.3	5	Ci.-S.	S.-Cu. NE	------	Ω² ≡ a. ⊍ ⊽ p.
23	60.52	24.7	31.5	19.5	81.5	N	1.3	3.7	Ci.	S.-Cu., Cu. NE	------	Ω² a. ⊽ p.
24	60.20	24.1	29.6	20.5	90.7	N	.8	5.7	Ci.-S.	S.-Cu. NE	5.4	⊍ Ω d p° ◠°
25	60.26	25.3	30.5	21.8	86.2	N	1.2	7.8	Ci.-S. SE	S.-Cu. ENE	2.6	⊽ d a. d p.
26	60.44	24.6	30.2	22.7	88.3	NE, N	1	6.8	A.-Cu.	S.-Cu. NE	2.1	p° d ⊽ p.
27	61.48	23.9	26.3	22.7	92.2	N	1.3	9.3	A.-Cu.	N. NE	11.9	d ◠² a. ●° p.
28	60.78	24.8	29.7	22	88.5	N	1.5	6.5	A.-Cu.	S.-Cu. NE	1.5	●° ◠° a.
29	59.65	25	29.9	21.5	82.7	N	1.7	6.7	A.-Cu.	S.-Cu. NE	------	
30	59.65	24	28.2	22.7	90.8	N quad.	1.2	8	Ci.-S.	S.-Cu. NE, WNW	14.5	● a. d p.
31	59.84	25.1	29.6	21.7	87.8	N	1.3	6.5	A.-Cu. E	S.-cf. NE, ENE	10.9	Ω² a. d ● p.
Mean	759.52	24.9	29.9	21.9	88.3	----------	1.2	5.9	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	157.8	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*P. ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.92	26.6	30.2	24.4	86.5	NE	10	6.5	A.-Cu., Ci.-S.	Cu. ENE	21.1	●° a. p.
2	60.17	25.2	26.4	23.2	87.8	NE	13.8	8.5	Ci.-S.	N. ENE	10.2	● a. p.
3	61.26	26.5	28.5	24.2	79.3	NE	21.5	5.5	Ci.	Cu.-N. ENE	17.7	≡° d a. ● p.
4	61.39	25.8	26.9	23.7	88.8	NE, ENE	10.3	7.8	Ci.-S.	N. E	49.3	● a. p.
5	60.92	25.8	27.3	23	86.8	NE	15.6	8.2	Ci.-S.	Fr.-N. E	27.7	● a. p.
6	59.90	26.2	29.2	22.5	84.3	NE	13	7.8	Ci.-S.	Cu.-N. ENE	26.7	● a. p.
7	58.98	26.5	29	24.1	75.7	NE	18	3.7	Ci.	Cu.-N., Cu. NE	------	●° a. ↘ p.
8	58.57	25.8	28.2	24.3	83.8	NE	13.5	5.5	A.-Cu. E	Cu.-N. NE	30.5	d a. ● p.
9	58.46	26.1	28.4	23.3	85.8	NE, ENE	17	8.5	Variable	Cu.-N. ENE	8.9	● a.
10	58.62	26.9	29.6	24.8	77.8	NE	15.5	5	Ci.	Cu.-N. ENE	------	d p.
11	57.85	25.7	29.3	22.8	84.5	NE	13.5	5.5	A.-Cu. E	Cu.-N. ENE	22.6	≡° a. ● a. p.
12	58.19	26.5	29.4	23.8	77.8	ENE	14.8	2.2	Ci.	Cu. ENE	------	d ≡° a.
13	57.68	26.4	30.2	22.2	76.5	NE	8.6	1.8	Ci.	Cu. ENE	------	≡° a.
14	58.05	25.7	31.1	19.9	81.7	NE	8.9	3.8	Ci.	Cu. NE	------	
15	59.31	26.4	30.6	23	73.8	NE	16.7	6.7	A.-Cu. ENE	Cu. ENE	13.2	● p.
16	60.16	24.9	27.2	22.5	85	NE	18.4	8.7	Ci.-S.	Cu.-N., Fr.-N. ENE	4.9	● a. p.
17	59.62	25.5	29.7	23.3	82	NE	16.9	3.8	Ci.-S.	Cu. NE	1.6	d a. p.
18	59.41	24.6	26.5	23	90.6	NE	19.6	9.3	Ci.-S.	N. NE	14	● a. p.
19	59.92	23.9	24.5	22.7	92	NE	20.2	10	Ci.-S.	N.	161.4	● a. p.
20	61.02	23.7	24.4	20.7	94	NE	9.3	10	----------	N. NE	97.8	● a. p.
21	60.80	24.2	27.3	22.5	93.2	NE	7.5	7.3	Ci.-S.	Fr.-N. ENE	18.1	● a. p.
22	60.89	26.1	30	23	79.2	NE	10.4	1.5	Ci.	Cu. NE	.3	
23	60.68	26.3	29.9	22	75.7	NE	14.2	4	Ci.-S., Ci.	Cu. NE	7.1	d a.
24	60.44	25.7	30	22.5	79.5	NE	13.2	6.3	Ci.-S.	Fr.-N. NE	3.3	● a. p.
25	60.44	25.6	31	22.5	80.5	NE	11.9	6.3	A.-Cu. ENE	N. NE	6.9	d a. ● p.
26	61.09	24	27.8	22.3	87.8	NE	---------	8.7	Ci.-S.	Cu.-N., Fr.-N. NE	12.2	● a. p.
27	62.03	24.6	27.4	22.6	80.8	NE	---------	7.2	Ci.-S.	Cu.-N. NE	2.3	● a. d p.
28	61.21	25.2	28.5	22.5	79	NE	20	4.3	Ci.	Cu.-N. NE	3.9	● a. d p.
29	59.98	25.3	29.1	22	70.8	NE	18.1	1.8	Ci.	Cu. NE	------	d p.
30	59.76	24	28.1	19.8	85.2	NE	15.1	8.2	Ci.-S.	Cu..N. NNE	9.4	d a. ● p.
31	60.41	24.3	26.1	22.3	91.2	NE	19.7	10	Ci.-S.	N., Fr.-N. NE	65.4	● a. p.
Mean	759.88	25.5	28.4	22.8	83.1	----------	14.7	6.3	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	636.5	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*P. ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.12	26.1	28.6	24.4	87.9	N quad.	16.1	7.3	A.-Cu. E	S.-Cu. NE quad.	------	
2	60.37	26	28.5	23.2	82.3	NE quad.	23.5	6.7	A.-Cu. E	Cu. E	2.3	●° p.
3	61.86	26	28.3	23.7	84.5	NE	25	9	Ci. S by W	S.-Cu. NE	.3	d° a. p.
4	61.70	26	29.8	24.5	88.5	NE	23.3	9.5	A.-Cu. E	S.-Cu. ENE	1.6	◠° a. d a. p.
5	61.24	26.2	27.8	25.2	87.7	NNE	24.7	7	Ci., A.-Cu. ENE	S.-Cu. NE	------	◠° a. d a. p.
6	60.31	25.6	27.2	23.9	88.5	NNE, NE	23.8	9.3	Ci.	S.-Cu. NE	11.7	d a. ● p.
7	59.48	25.8	27.7	23.9	80.8	NE	26.9	6.2	Ci.	S.-Cu. NE	------	●° p.
8	59.04	25.3	26.9	24	85.5	NE	25.9	8.3	A.-Cu. ENE	S.-Cu. NE	6.9	d° a. d² p.
9	58.74	26.2	28.9	24	86	NE	26.3	8.8	A.-Cu. E	S.-Cu. ENE	.3	d a. p.
10	58.94	26	28.7	22.6	84.2	NE	22.3	5.2	A.-Cu. E	S.-Cu. ENE	------	Ω° a.
11	57.97	26.2	29.2	25	85.8	NE	23	7.7	A. Cu. E	S.-Cu. NE	------	
12	58.12	26.9	29.7	24.4	80.2	NE	18.7	3.7	A.-Cu. E	S.-Cu. NE	------	
13	57.77	26.5	29.2	24.6	78.6	NE	18.9	3.5	A.-Cu. NE, E	S.-Cu. NE	------	
14	58.14	25.6	27.4	22.1	80.3	N quad.	16.9	6.5	Ci. E	S.-Cu. NE	------	Ω a.
15	59.45	26.1	28.2	23.5	77	NE	24.8	6.8	Ci. SW	Cu., S.-Cu. NE	------	
16	60.83	24.7	25.7	23.3	79.9	NE	28.8	9.7	Ci.	S.-Cu. NE	4.8	d ● p.
17	60.43	25.3	26.9	23.3	76	NNE	29.1	5.2	Ci.	S.-Cu. NE	1	d ●° a.
18	60.09	25.7	27.4	23.9	75	NNE	27.8	6	A.-Cu. NE	Cu., S.-Cu. NE	1	d ●° p.
19	60.92	25.8	26.7	22.9	75.8	NNE, NE	28.4	8.7	Ci.	S.-Cu. NE	14.2	d a. ● p.
20	61.45	24	24.7	22.5	88.3	N, NE	24.6	10	Ci.-S.	N. NE	24.1	d ● a. d p.
21	60.68	24.9	26.8	23.1	89.7	NE	10.2	10	A.-Cu. NE, E by S	S.-Cu. E quad.	10.9	d ●° a. p.
22	61.04	25.4	28.9	22.5	84.4	N	13.5	5.3	Ci.	Cu. NE	------	≡° a. ☋² p.
23	61.09	25.9	28.5	22.9	80.3	NE	19.3	4.5	Ci. SW	S.-Cu., Cu. NE	------	☋ a. p.
24	60.94	25.6	28	24.3	81.8	N, NE	24.3	7.2	Ci.	Cu., S.-Cu. NE	------	d° a. p. ☋ p.
25	60.93	25.2	27.1	22.7	82.7	N	25.7	9.3	A.-Cu. NE	S.-Cu. NE	1.5	☋ d ●° a. ☋ p.
26	61.50	25.4	27.2	23.9	77	NE	27.5	7.8	A.-Cu. E	S.-Cu. NE	.3	d ☋° a. p.
27	63.07	24.6	26.2	22.7	73.8	NE	31.3	7.7	Variable	S.-Cu. NE	------	d a. p. ☋° p.
28	62.28	25	27.3	23.5	70.4	N, NE	32	5.5	A.-Cu. NE	Cu. NE	------	↙° ☋ a. p.
29	60.80	24.9	27	23.5	73.8	NNE, NE	27	5.7	A.-Cu. NE	S.-Cu. NE	------	☋² d a. ☋° p.
30	60.97	24.3	25.5	23	81.5	N	---------	8	Ci.	S.-Cu. NE	1.8	☋² a. d a. p.
31	61.80	24.3	25.2	22.8	81.8	N, NE	31.3	10	Ci., Ci.-S.	S.-Cu., N. NE	4.1	d a. p.
Mean	760.36	25.5	27.6	23.5	81.6	----------	24	7.3	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	86.8	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ISIDRO.

[$\phi = 15°\ 22'$ N; $\lambda = 120°\ 53'$ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*P. ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.16	------	------	------	------	NNE, ESE	1.7	4.2	A.-Cu.	Cu. E	------	☊² a.
2	60.11	------	------	------	------	NNW, E	1.8	3.7	A.-Cu. SE	Cu.-N. E	------	♆² a. ☊ a p.
3	61.64	------	------	------	------	NW, NNW	1.5	5	Ci. SW	Cu. E	1.3	☊² a. ☾² ☌ p.
4	61.96	------	------	------	------	NW	1.6	7.3	Ci.-S., A.-Cu.	N., Cu. ENE	4.1	● ☽° p.
5	61.28	------	------	------	------	E quad.	1.2	5	A.-Cu. SE	Cu. ENE	------	
6	60.54	------	------	------	------	ESE, NNW	1.8	4.2	Ci. SE	S.-Cu., Cu. E	------	☊ a. p.
7	59.51	------	------	------	------	E quad.	1.8	2.8	Ci. SW	Cu. E	------	☊² ☰° a. ☊° p.
8	59.16	------	------	------	------	NW, NNE	1.8	3.7	A.-Cu. SE	S.-Cu. E	------	☊² ☰° a.
9	58.82	------	------	------	------	E quad.	2.2	4.7	Ci.	S.-Cu.	.8	☊² a.
10	58.91	------	------	------	------	E quad.	1.4	4.5	Ci. SSW	Fr.-Cu., Cu. E	------	☊° ●° p.
11	58	------	------	------	------	E quad.	1.6	6.5	A.-Cu. ENE	Cu.-N. E	------	☊° p.
12	58.22	------	------	------	------	Variable	1.2	4	A.-Cu. SE	S.-Cu. E	------	☊° a.
13	57.58	------	------	------	------	E, NW	1.1	2.8	Ci.	Cu. E	------	☊ a. p.
14	58.22	------	------	------	------	NNW, ENE	.9	4.8	Ci. SE	Cu. NE	------	☊² a.
15	59.42	------	------	------	------	E quad.	1.4	4.7	Ci. SE	Cu.-N. E	------	☊² a. p. ☌° a.
16	60.52	------	------	------	------	Variable	.7	5.2	Ci.	Cu. E	------	☊ a. p.
17	60.27	23.7	28.7	18.5	67.9	WNW, E	1.7	3.3	Ci. SE	S.-Cu., Cu.	------	☊ a. p.
18	59.93	23.2	29.2	17.4	71	NW, E	1.5	3.5	Ci.	Cu. E	------	☊ a. p.
19	60.79	24.1	29.5	19.3	69.9	Variable	1.8	6.7	A.-Cu. SE	Cu. E quad.	.8	☊° a. ♆² d° p.
20	61.26	24.1	28.7	21.5	72.2	NE, NNW	.7	8.5	A.-Cu. SE	N. E	------	☿° ⊕² a. ♆² p.
21	60.57	24.8	29.7	20	77.8	NW, ENE	.9	7.3	A.-Cu. SE, S	Cu. ESE	3.8	☊° a. ● ♆² p.
22	60.64	25.2	30	21.8	80.7	NNW	1.1	6.5	A.-Cu. SE	Cu. E	------	☊² ☾ a. ♆° ☊ p.
23	60.93	25.3	29.7	22.4	73.2	E quad.	1.6	6.3	A.-Cu.	Cu. ENE	------	☊° a.
24	60.86	25.4	30.3	20.8	70.7	NNE, NNW	.9	6	Ci.	S.-Cu. NE	------	☊² a. ♆² p.
25	61.10	24.5	30	19.2	73.5	NW	1.7	5.7	Ci. SE	Cu. NE	------	☊² a.
26	61.34	23.6	28.7	19.4	72.5	NNW	1.7	5.7	Ci. SE	S.-Cu., Cu. NE	------	♆° a. ☊° a. p.
27	62.74	22.7	28.5	18.2	70.5	E, NW	1.7	3.7	Ci.	Cu. ENE	------	☊ a. p.
28	62.07	22.9	28.6	17	68.8	E, NW	1.2	3.5	Ci. SE	S.-Cu.	------	☊ a. p.
29	60.67	23.4	29.8	17.8	70.4	NNW	.8	3.3	Ci.	S.-Cu.	------	☊ a. p.
30	60.78	24.3	30.2	18.5	66.5	NE quad.	1.5	4.5	Ci. SE	Cu. E	------	☊² ☌° a.
31	61.30	23.8	29	19.5	69	NE quad.	1.5	4	Ci.	S.-Cu., Cu. E	------	☊° a.
Mean	760.27	24.1	29.4	19.4	71.6	----------	1.4	4.9	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	10.8	

DAGUPAN.

[$\phi = 16°\ 03'$ N; $\lambda = 120°\ 20'$ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*P. ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.16	25.8	30.7	20.9	85.8	SE	8.0	1.3	----------	S.-Cu.	------	
2	60.04	26.2	33.2	22.3	87.5	Variable	8.5	4.3	Ci.-S.	S.-Cu. SE	.3	⊤ d° ≤ p.
3	60.97	25.7	33.1	21.3	79	SSE	12.7	2	Ci.	S.-Cu. SE	------	
4	61.74	26.6	32.4	21.9	80.2	SE, S	9	5.3	A.-Cu.	S.-Cu. ESE	------	
5	60.91	26.5	32.6	22.8	79.7	Variable	8.2	5.7	A.-Cu.	S.-Cu.	------	
6	60.39	26	33.2	21	83.1	S, NW	13.1	2.7	Ci.	S.-Cu.	------	
7	58.82	26	33.3	20.9	74.3	S, SE	16.2	1.8	Ci.	Cu., S.-Cu.	------	
8	58.93	24.1	31.1	17.8	79.5	Variable	9	.5	Ci.	Cu.	------	
9	58.63	25.8	34.4	20.2	78.8	ESE	9.3	3.5	A.-Cu.	S.-Cu. E	------	
10	58.70	26.2	35	21	81.2	SE, N	8.6	3.3	Ci.	S.-Cu. E	------	
11	57.63	26.3	35.3	20.6	78.8	SE, SSE	11.4	1.8	----------	S.-Cu. NE	------	
12	57.93	25.8	31.4	20.6	82.5	Variable	8.6	.7	----------	Cu.	------	
13	57.47	25.2	33.6	19.2	83.4	Variable	10.2	.3	Ci.	Cu.	------	
14	58.15	24.9	29.9	19.9	88.7	NW	11.6	4	Ci.	S.-Cu. NNW	------	
15	58.79	25.4	33.6	19.6	82.7	SE	13.1	2	Ci.	S.-Cu.	------	
16	60.08	25.5	33.2	20.6	76.8	S	15	2.8	Ci.	S.-Cu.	------	
17	60.08	25.4	33.1	20.4	79.5	S	10.3	1.2	Ci.	S.-Cu.	------	
18	59.60	24.2	31.3	18.8	85.5	Variable	11.3	1	Ci.	S.-Cu.	------	♆ p.
19	60.26	24.9	32.6	20.2	83.8	S	13.8	2.5	Ci., A.-Cu.	S.-Cu. ESE	------	
20	60.92	24.8	28.3	22	83.3	S	11.7	10	----------	S.-Cu.	.8	d p.
21	60.46	25.2	30.4	20.5	89.1	NNW	8.4	7.7	Ci., A.-Cu.	S.-Cu. S	19	☿² p.
22	60.64	25.8	30.2	22.4	91.5	NW	7.5	6	A.-Cu.	S.-Cu. ESE	------	♆ p.
23	60.61	25.7	33.6	22.4	88.3	SE	8.2	7.8	A.-Cu.	S.-Cu.	15.2	☿² ⊤ p.
24	60.81	25.7	30.8	21.5	89.8	NW	8.9	4.8	A.-Cu.	S.-Cu.	.5	d° p.
25	61.42	24.3	27.9	21.3	90.2	NNW	20.6	5.3	Ci.	S.-Cu. NNW	------	d° a. ♆ p.
26	61.22	23.6	28.6	18.2	88.2	NW	10.2	2.8	Ci.	S.-Cu.	------	♆ ☰° a.
27	62.25	24.2	32.1	19	79.5	S, SE	12.5	.7	Ci.	Cu., S.-Cu.	------	♆° a.
28	61.83	24.4	32.4	19	79.8	S quad.	12.1	2	Ci.	Cu.	------	
29	60.61	24.6	31.3	18.7	74.8	SE, NW	10.2	1.3	Ci.	S.-Cu.	------	♆ a. p.
30	60.84	24	30.2	18.4	78.2	SE, NW	9.5	.8	Ci.	S.-Cu.	------	
31	60.82	24.8	29.8	20.5	73.5	Variable	10.4	1.5	Ci.	S.-Cu.	------	♆° a.
Mean	760.02	25.3	31.9	20.4	82.5	----------	10.9	3.1	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	35.8	

METEOROLOGICAL DATA, ETC.—Continued.

BOLINAO.

[$\phi = 16°\ 24'$ N; $\lambda = 119°\ 53'$ E; barometer above sea, 8.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.14	26.3	28.6	24.3	84.5	NE quad.	3	7.5	Ci.-S.	Cu. NE	-------	☊ ≡° a.
2	60.14	26.4	28.7	23.9	83.5	NNE	3	9.3	Ci.-S.	Cu.-N.	-------	☊ ≡° a. ≲ p.
3	61.06	25.7	29.9	21.1	80.2	SE quad.	1.7	6	Ci.-S.	S.-Cu.	-------	☊² ≡ a.
4	61.80	26	29.3	22.6	81.8	SE, NNE	2	7.7	Ci.-S.	Variable	-------	☊ ≡° a. d p.
5	60.93	26.6	30.6	23	80.8	SE	1.8	7.8	A.-Cu.	S.-Cu.	-------	☊ ≡° a.
6	60.26	26.1	29.7	22.5	77.5	SSE, NNE	3.3	8.2	Ci.-S.	S.-Cu., Cu.	-------	☊° ≡° a.
7	58.67	26.1	31.9	22	75.8	SE	2.8	8	Ci.-S.	Cu.	-------	☊° ≡° a.
8	58.76	24.9	30.4	20.9	75.2	SE	3.2	3.7	Ci.-S.	S.-Cu.	-------	☊² ≡ a.
9	58.46	25.2	29.1	20.7	81.3	SE, NNE	2	4	Ci.-S.	S.-Cu.	-------	☊² ≡ a.
10	58.50	25.7	32.2	20.4	78.3	SE quad.	1.7	1.3	Ci.-S., Ci.	S.-Cu.	-------	☊² ≡ a.
11	57.47	25.3	31	19.4	77	SE quad.	2.3	2	Ci.	Cu.	-------	☊² ≡ a.
12	57.79	25.5	29.2	20.8	79.4	SSE, NNE	2.5	3	Ci.	S.-Cu., Cu.	-------	☊ ≡° a.
13	57.28	24.6	29.7	20.9	78.3	SSE	2	2.2	Ci.	S.-Cu., Cu.	-------	☊ ≡° a.
14	58.11	24.8	27.8	20.7	79.3	NNE	3.8	6.2	Ci.-S.	Cu. NE	-------	☊ ≡° a.
15	58.71	25.4	30.2	20.8	77.7	Variable	2.5	8.2	Ci.-S.	S.-Cu.	-------	☊² ≡ a. d p.
16	59.75	25.4	31.1	21.8	75.7	SE	3.5	6.3	Ci.-S.	S.-Cu.	-------	☊ ≡° a.
17	59.89	25.2	30.7	20.9	75.6	SSE, NNE	2.8	3.5	Ci.	Cu.	-------	☊ ≡° a.
18	59.46	23.8	27.7	18.8	77.8	SSE, NNE	2.5	3.8	Ci.	S.-Cu., Cu.	-------	☊ ≡° a.
19	60.06	24.2	27.8	20.2	77.8	SE quad.	2.7	6.2	Ci.	S.-Cu.	-------	☊ ≡ a.
20	60.58	25	28	22.6	75.6	SE quad.	3	10	Ci.-S., A.-Cu.	Cu.-N.	-------	≡° d a. d p.
21	60.35	26.1	28.8	23.5	79.3	ESE, NNE	3.2	10	Ci.-S.	S.-Cu.	-------	☊° ≡° a.
22	60.49	26	28.4	24.2	83.5	NNE, SE	2.2	8	A.-Cu	Cu.-N.	0.5	☊° ≡° a. d a. p.
23	60.45	26.3	31.1	23	81.2	SSE	1.8	8.2	A.-Cu., Ci.	S.-Cu.	-------	☊° ≡° a. ≲ d p.
24	60.78	25.7	29.7	21.6	81.7	NNE	2.8	7.2	A.-Cu.	Cu.	-------	☊ ≡° a.
25	61.68	24.5	25.8	23.1	77.5	NNE	6.5	9.7	Ci.-S.	Cu.-N. NNE	-------	≲° a. p.
26	61.19	24.2	26.9	22.3	75.2	NNE	3.3	7.2	Ci.-S.	S.-Cu.	-------	≲ ≡° a.
27	62.01	24	29.9	19.4	77.3	ESE	2.5	4.2	Ci.-S.	S.-Cu.	-------	☊² ≡ a.
28	61.74	24.4	29.6	20.3	75.3	SE, NNE	3.2	4	Ci.-S.	Cu.	-------	☊ ≡° a.
29	60.41	24.2	28.3	18.9	76.4	SE, NNE	2.8	4	Ci.	S.-Cu.	-------	☊² ≡ a.
30	60.67	23.9	27.3	19.1	77.7	NNE	2.7	5.2	Variable	S.-Cu.	-------	☊ ≡ a.
31	60.81	24	27.5	19.3	79.2	NNE	3	5.2	Ci.	Cu.	-------	☊ ≡° a.
Mean	759.92	25.2	29.3	21.4	78.6	----------	2.8	6.1	----------	----------	-------	
Total	-------	------	------	------	-------	----------	-------	-------	----------	----------	.5	

BAGUIO.

[$\phi = 16°\ 25'$ N; $\lambda = 120°\ 36'$ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

	[1] *mm.*	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	636.82	18.3	24.1	15	77.5	E	14	4	Ci.	Fr.-N. ENE	-------	☊ ≡° a. ≡ p.
2	37.46	16.8	22.4	14.7	91	E	13.2	7.1	Ci., A.-Cu.	Cu.	-------	☊ ≡° a. ≡² ┼ ●° p.
3	38.20	17.3	23.1	14	81.9	SE quad.	25.9	3.3	Ci.	Cu. E	-------	
4	38.88	17.4	24.5	13.8	80.3	E	27.3	5.1	Ci.	Cu. E	7.1	☊ a. ↙° ● p.
5	38.45	18.2	24.1	15.3	76.8	E	19.6	6.3	A.-Cu. S	S.-Cu. S	-------	≡ p.
6	37.90	18.1	24.6	14.3	69.9	E, SE	13.2	4.3	Ci.	Fr.-Cu. S	-------	
7	36.51	17.8	24	14.3	42.7	SE quad.	21.4	6.9	Ci. W	Cu.	-------	☊ a. ≡ p.
8	36.12	18.6	25	14.5	47.4	SE	19.4	1.3	Ci., A.-Cu.	Cu.	-------	∞ ≡ ↙ p.
9	36.28	17.9	23	14.2	76.8	E	30.4	5	Ci., A.-Cu.	Cu. E	-------	
10	36.50	17.7	24	13.2	76.8	SE	12.5	1.4	Ci.	Cu. SE	-------	
11	35.52	18.1	25	13.4	75.8	E	12.7	3.6	Ci.	S.-Cu. ENE	-------	☊ a. ≡° p.
12	35.55	17.2	24.8	13.6	79.5	E	15.6	2.9	Ci.	Cu.-N. NW	-------	☊ a. ∞ ≡ p.
13	35.21	17.9	24.3	13.1	80.5	E, SW	10.7	2.1	Ci.	Cu.	-------	☊ ≡° a. ∞ ≡° p.
14	35.40	16.1	22.4	12.9	93.3	Variable	12.3	6.3	Ci.	Cu. N	-------	☊² a. ≡ p.
15	35.99	16.6	24.3	12.7	79.8	E, SW	15.5	4.6	Ci.	Cu.	-------	☊ a. ≡° p.
16	36.81	15.4	23.2	11.3	82.8	E	20.2	5.1	Ci.	Cu. NW	-------	☊ a.
17	36.85	15.7	22.6	11.9	84.7	E, W	14.5	3.9	Ci.	Cu. NW	-------	☊² a. ≡° p.
18	36.47	15.5	23	12.9	75.3	E	17.4	4.3	Ci.	Cu. SE	-------	☊² a.
19	36.98	15.7	21.7	12.5	79.7	SE, E	25.1	2.7	A.-Cu. S	Cu.	-------	☊ a.
20	37.70	15.8	20.2	14	86	E	18.7	10	A.-S.	S.-Cu., Fr.-N.	1.8	d° a. ●° p.
21	37.77	17.8	23.7	14.4	89	E	10.5	8.3	A.-Cu. SE	Fr.-N.	19.6	d° ● ≡² p.
22	37.78	16.8	20.2	15	99.2	E	6.7	10	A.-Cu.	N. SEbyE	4.6	≡° ● a. d ≡ p.
23	37.81	16.4	20.5	14.7	97.3	Variable	10.8	8.3	Ci.-Cu. SSW	Cu. N	-------	≡² d p.
24	37.82	16.6	22.5	14.2	97.7	E	11.3	8.6	A.-Cu.	Fr.-N. NW	12.7	≡ a. p. ● p.
25	37.78	15.8	21.5	12.5	82.6	NE quad.	13	6.9	Ci.	Fr.-N. N	-------	☊ a. ≡° a. p.
26	37.29	14.4	21.3	11	76.1	E	22.7	3.3	Ci.	Cu.	-------	☊ a.
27	38.18	14.7	22.2	10.7	85.7	E	15.2	4.4	Ci.	Cu. E	-------	☊ ☋ a. ≡ p.
28	38.06	15.4	21.4	12.2	88.8	SW quad.	8.5	3.3	Ci.	Cu. NNW	-------	☊² ≡° a. ≡ p.
29	36.89	14.9	21.8	11.1	90.2	N, WSW	12.6	5.6	Ci.	S.-cf. NW	-------	☊² ≡ a. ≡° p.
30	37.08	14.6	21.8	10.1	82.5	E quad.	15.3	1.9	Ci.	Cu. S	-------	☊² ≡° a.
31	37.42	15	21.9	12.2	86.5	E	26.1	2.9	Ci.	Cu.	-------	
Mean	637.08	16.6	22.9	13.2	81.1	----------	16.5	5	----------	----------	-------	
Total	-------	------	------	------	-------	----------	-------	-------	----------	----------	45.8	

[1] Not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	759.26	25.7	30.4	21.6	84.2	N	0.8	0.2	Ci.	Cu.	------	☊ ☰° a.
2	60.43	25.4	30.4	22.6	77.2	NNE	1.3	3.8	Ci.-S.	S.-Cu.	------	☊ ☰° a.
3	60.94	27.4	34.6	22.5	66	NE	1.2	.2	Ci.	Cu.	------	☰° a.
4	61.87	26.9	31.5	22.7	76.8	NNW	1	1.7	Ci.	S.-Cu., Cu.	------	☰° a.
5	61.11	27	31.7	23.9	80.2	NW quad.	.7	6.7	Ci.-S.	S.-Cu.	------	☰° a.
6	60.51	26.3	31.7	23.1	82.6	Variable	.8	1.5	A.-Cu., Ci.	S.-Cu.	------	☰° a.
7	58.90	25.8	31	21.5	75.7	Variable	.7	.5	Ci.	Cu. NE	------	☰° a.
8	59.05	24.4	30	19.5	77.7	E	1	.2	Ci.-S.	S.-Cu.	------	☰° a.
9	58.87	25.2	31.6	19.9	76.3	NW	.8	.2	Ci.	Cu.	------	☰° ☊ a.
10	58.74	26	31	21.5	76.3	Variable	1	0	Ci.	Cu.	------	☰° ☊ a.
11	57.85	25.8	31.5	21.4	76.3	N quad.	1.2	0	Ci.-S.	S.-Cu., Cu.	------	
12	58.11	26.1	31	21.8	79.2	Variable	.8	.7	Ci.-S.	S.-Cu.	------	☰° ☊ a.
13	57.58	25.6	31.4	21.6	77.8	Variable	.7	0	Ci.-S., Ci.	S.-Cu., Cu.	------	
14	58.53	24	29.9	19.4	77.4	N quad.	1.8	.7	Ci.	Cu. NNW	------	☰° ☊ a.
15	59.04	25.4	32.4	19.7	64.3	NE quad.	1.2	.7	Ci.	Cu.	------	☰° ☊ a.
16	60.10	25.8	31.8	22	64.4	NE	1.7	.7	Ci., A.-Cu.	Cu.	------	
17	60.14	25.3	30.8	21.4	67.2	N quad.	1.3	.3	Ci.	Cu.	------	☰° a.
18	59.59	25.4	30.9	18.4	63.8	Variable	1.3	0	Ci.	Cu.	------	☊ ☰° a.
19	60.13	27	33.2	22.3	52.1	NE	1.5	.2	Ci.	Cu.	------	☰° a.
20	60.89	26.4	31.4	23.5	65	ENE	1	7	Ci.-S.	S.-Cu.	------	☌° a. p. ☋ p.
21	60.73	25.6	30.1	21.9	76.3	N	1	6.2	Ci.-S.	S.-Cu.	------	☰° a. ☋ p.
22	60.62	25.6	32.4	23	78.5	N quad.	1.3	6.3	A.-Cu.	S.-Cu.	------	☰° a.
23	60.64	27.2	31.5	22.8	67	Variable	.8	3	A.-Cu.	S.-Cu., Cu.	------	☋ p.
24	60.94	25.3	30.5	21.2	77.7	N quad.	1.7	2	A.-Cu.	Cu.	------	
25	62.30	22.4	26.5	19	77	N	2.7	1	Ci.	Cu. NNE	------	
26	61.36	23.4	29.7	17.7	61.5	NE quad.	1.3	0	Ci.	Cu.	------	
27	62.21	25.4	31	22.4	51.8	ENE	1.7	0	Ci.	Cu.	------	
28	61.90	24.6	30.3	20.7	62	NNW, SSE	1.2	.2	Ci.	Cu.	------	☋ p.
29	60.68	23.6	29.6	19.5	66.5	NE quad.	1.2	0	Ci.	Cu.	------	☰° a.
30	61.07	24.2	29.8	18.5	60.3	NE quad.	1.2	0	Ci.	Cu.	------	☋ ☰° a.
31	61.19	25.7	31.5	20.2	50.1	NE quad.	2.2	0	Ci.	Cu.	------	☋ p.
Mean	760.17	25.5	31	21.2	70.6	----------	1.2	1.4	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	------	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	759.76	25.3	31.8	20.6	84.3	Variable	0.5	2.2	----------	Fr.-Cu. SE	------	☊² ☰ a.
2	61.86	23.5	25.5	21.7	87.7	N	.8	9.3	A.-S., Ci.-S.	Cu.-N. NE	9.9	d a. ● p.
3	63.86	23.4	26	21.6	90.6	N	.2	9.7	A.-S.	Cu.-N. NE	------	d ● a. d p.
4	63.75	24.9	30.8	21.5	85.2	Calm	---------	8.8	----------	Cu.-N. S	------	d p.
5	62.57	24.7	30.4	21.5	87.7	SE	.7	7.2	----------	Cu.-N. SW, E	17.8	● a.
6	61.38	25.4	32.2	20.4	81.2	SE	.3	3.2	Ci.	Variable	------	☊ a.
7	60.79	23.6	31.1	19.5	84.2	Calm	---------	3.3	Ci.	Cu. E	------	☊² ☰ a.
8	60.32	23	31	16	79.2	SE	.3	.7	Ci. SE	Cu.	------	☊² ☰ a. ☊² p.
9	60.17	24.2	31.8	18.2	86.8	S	.2	4.5	----------	Cu. E	------	☊² a.
10	59.71	24.9	32.1	20.2	82.2	SE	.7	4.2	----------	S.-Cu. SE	------	☊² ☰ a.
11	58.66	24.3	30.5	18.8	82.5	SE	.2	3.5	Ci.	Cu. SE	------	☊² a.
12	58.84	24.1	30.4	19.6	80.8	SE	.2	4	Ci., A.-S.	S.-Cu.	------	☊ a.
13	57.99	24.1	32.4	18	80.5	Calm	---------	.3	----------	S.-Cu.	------	☊² ☰ a.
14	58.97	23.8	30.5	18.5	81.8	NE	.3	3.2	A.-Cu. N	Cu. N	------	☊ a.
15	61.43	22.6	26	19.5	78.4	NE	1.2	8.3	----------	S.-Cu. N, NE	------	d a. p.
16	62.46	22.9	29	18.5	77.7	Calm	---------	6.2	A.-Cu. SW	Cu. SW	------	d a.
17	61.54	23.8	30.8	18.3	77	Calm	---------	4.2	Ci.	Cu. NE	------	☊ a.
18	61.66	23.1	29.4	17.9	77.9	NE	.5	6.3	----------	Cu.-N.	------	☊² a. d ◠ p.
19	63.23	22.5	27.5	19.6	81.3	NE	.7	7.5	Ci., Ci.-S.	Cu.-N., Cu. E, NE	------	☊ ◠° a.
20	62.73	23.2	28.6	19.8	81	SW	.3	8	----------	S.-Cu. S, SW	------	☊² a.
21	61.02	24.4	32.1	19.5	84	SW	.5	7.8	Ci.	S.-Cu. SW	------	☊ a. d p.
22	61.83	23.9	29.4	21.4	87.8	NE	.8	9.5	----------	Cu.-N. N	3.8	☊ a. ● p.
23	62.28	23.8	27	21.3	85.7	NW	1	8.8	----------	Cu.-N. N, NE	------	☊ a.
24	62.20	23.8	28.1	21	83.3	N	1.7	6	----------	S.-Cu. N	------	☊ a.
25	62.80	22.3	27	19.2	83.8	N	2.3	6.3	Ci.-Cu. N	Cu. NE	------	☊ a. ◠ p.
26	64.03	20.6	24.3	17.4	82.7	NE, NW	1.5	7	Ci.-S., A.-Cu.	S.-Cu. NE	------	☊ a.
27	65.25	21.4	26.5	17.7	74.6	NE	.5	6.7	Ci.-S.	Cu. NNE, NE	------	
28	63.65	22.7	28.5	17	75	SE	.2	7.7	A.-Cu.	Cu., S.-Cu.	------	☊ a.
29	61.72	23.7	28.6	19	69.5	NE, NW	1.2	7.2	A.-Cu.	S.-Cu. N	------	☊ a.
30	63.09	22.3	28	16.5	74.2	NW	1.2	5.8	Ci.	Cu. N, NE	------	☊ a.
31	64.54	22.4	27	19.5	71.7	NE	2.7	7.3	A.-Cu. NE	Cu. N	------	☊ a.
Mean	761.74	23.5	29.2	19.3	81.3	----------	.7	6	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	31.5	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	760.32	24.6	27.7	21.1	85.7	NE	7	2.8	----------	S.-Cu.	------	Ω a.
2	62.60	24	25	21.2	80	NE	17.8	10	----------	S.-Cu., N NE	14.3	●° p.
3	64.62	22.8	24.5	20.6	85.8	NE	19.2	8.7	----------	N. NE	1.8	●° a.
4	63.95	24.3	27	21.6	84.5	SE, E	6.9	7.3	A.-Cu. SE	S.-Cu. E, SE	6.4	
5	62.79	24	28.1	21.5	87.2	SE, E	6.7	5.7	A.-Cu. S, SW	S.-Cu. SE	------	● a.
6	61.55	24.9	29.7	22	80	SE, NE	9.1	1.7	A.-Cu. SW	S.-Cu. SE	------	Ω a.
7	61.06	23.6	28.6	20	78	SW, E	6.2	0	----------	----------	------	Ω ≡° a.
8	60.44	22.8	28.7	18.5	78.2	S, E	9.2	.2	----------	Cu.-N.	------	Ω ≡° a.
9	60.48	24.1	30.5	19.7	84.3	S, E	6.6	3.2	----------	S.-Cu. E	------	Ω a.
10	60	24.5	29	20.1	82.3	E	6.2	0	----------	----------	------	Ω ≡° a.
11	58.82	24.6	30.2	20.5	80.3	S, E	7.7	0	----------	----------	------	Ω ≡° a.
12	58.92	24.6	30.5	21.4	80.7	E	7.4	3.5	----------	S.-Cu. SE	------	Ω a.
13	58.04	24.6	31	20.4	79.3	SE	9.6	0	----------	----------	------	Ω a.
14	59.47	23.6	28.2	20.6	81.3	W quad.	8.9	2	----------	S.-Cu., Cu.-N.	1.3	
15	62.30	22.7	24.5	20	68.5	NE	20.2	10	A.-Cu. S	S.-Cu. NE	------	● a.
16	63.07	22.2	27	19	73.8	SW, NE	7.9	10	A.-Cu. SE	S.-Cu. SE	------	
17	61.93	23.5	29.5	19.1	74	SE, S	8.1	1.3	----------	S.-Cu., Cu.-N.	------	Ω a.
18	62.41	21.6	25.8	17.6	83.5	NE	14.2	6.5	----------	Cu.-N. NE	8.6	Ω ≡° a. ● p.
19	63.96	22.2	25	19.5	75.2	NE	15.1	7.3	----------	Cu.-N. ENE	------	●° a.
20	62.81	22.7	26.5	19.8	82.2	E	5.4	10	A.-Cu. SW	S.-Cu. E, SE	------	
21	61.42	24.9	30.8	21	79	SE, NE	9.2	9.5	A.-Cu. W	S.-Cu. E	------	
22	62.42	22.9	24	21.6	88.8	NE	9.9	10	----------	Cu.-N. ENE	29.7	● a. p.
23	63.08	23.8	26.2	21.6	81.8	NE	13.2	9.7	----------	Cu.-N. NE	9.9	● a. p.
24	63.23	22.9	25	21	84	NE	10.7	9.7	----------	Cu.-N. NE	5.1	● a. p ◠ p.
25	63.55	22	25	19	80.5	N	13.9	9.7	----------	Cu.-N. N	21.4	●° a. ● p.
26	64.92	19.9	21.5	18.2	79.2	NE	18	10	----------	N. NE	8.7	●° a. p.
27	65.67	20.9	24.2	18	72.8	E	9.5	6.8	----------	Cu.-N. E	------	●° a.
28	64.06	21.8	25.4	17.7	76.3	SW, NE	9.6	5	A.-Cu. NE	S.-Cu.	------	
29	62.49	22.8	25.7	18.7	71.8	ENE, NE	6.4	2.7	A.-Cu. SW	Cu.-N. N, NE	------	Ω a.
30	63.83	22.6	26.2	18.7	75.8	NE	15.1	8	A.-Cu. SE	Cu.-N. NE	1.3	●° p.
31	65.65	21.6	23.1	19	72.3	NE	22.7	10	----------	Cu.-N. NE	1.3	●° a. p.
Mean	762.25	23.2	26.9	20	79.6	----------	10.9	5.8	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	109.8	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.
[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	22.1	94	76	9	9	36.9	☊² ●² a. ●° p.
2	31	22.2	96	80	9	8	------	☊ a. ⊤ p.
3	32.8	21.8	93	70	9	8	------	☋ ☊² ≡ a. d p.
4	31.6	21.8	97	69	9	8	------	☊ a.
5	31.4	22.8	94	63	8	7	------	☊ a.
6	31.2	22	94	77	9	9	------	☊ a. d p.
7	31.7	21.8	97	68	8	7	2	☊ a. ↙ p.
8	29.6	22.2	96	73	8	8	------	●° a.
9	31.3	22.7	94	74	9	8	11.9	☊ a. ⌒ p.
10	31.6	23	92	66	9	7	------	●² a.
11	31.9	21.3	95	69	7	6	1.3	☊² ≡ a.
12	32.9	22.2	96	69	8	7	------	d² a.
13	32.3	25.2	93	72	8	8	46.2	☊ a. ↙ p.
14	31.3	22.9	94	74	10	9	1	●² a.
15	30.6	23	92	74	9	8	------	☊° a.
16	31	22.2	97	74	10	8	3	☊ d° a. ● p.
17	31.5	22	97	71	8	7	------	☊² ≡ a.
18	31.9	24.6	93	72	9	9	------	☊° a. ◪ d ☋
19	30.4	24	91	88	9	10	2.3	☊ a. ● ⊤ d p.
20	29.6	22.5	95	69	9	9	------	☊ a. d° p.
21	31.2	22.4	95	77	7	8	------	☊ a. ☋ p.
22	31.6	21.8	98	76	8	6	------	☊ a.
23	31.1	22.4	87	70	8	8	1.3	☊ d a. ☋ p.
24	28.4	22.2	89	87	8	10	2.5	☊ a. d² ●° p.
25	30.9	23.9	90	73	9	8	4.6	☊ a.
26	28.5	23.5	93	78	10	9	------	● d a.
27	29.9	22.5	89	77	9	9	2	☊° d a. ● p.
28	30.9	21.9	96	73	8	8	------	☊² ≡ d² a.
29	29.4	24.3	86	71	9	7	------	
30	30.7	24	89	76	9	8	------	☊° d° a.
31	30.5	24.6	86	74	9	9	2.3	☊° a.
Mean	31	22.8	93.2	73.5	8.6	8.1	------	
Total	------	------	------	------	------	------	117.3	

ISABELA, BASILAN.
[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	21.8	96	80	1	10	------	☊ a. d p.
2	32.9	23.5	94	69	10	4	------	☊ a.
3	33.3	21.5	96	65	10	8	------	☊ a.
4	33.3	21.5	96	63	4	7	------	☊ a.
5	33.3	21.8	96	66	10	6	------	☊ a.
6	32.8	22.3	96	70	10	5	------	d a.
7	32.3	21.5	98	71	1	6	------	☊ a.
8	33.3	23	94	57	10	6	0.5	☊ a. d ◪ p.
9	33.3	22	96	67	1	4	5.3	☊ a. ↙ ● p.
10	33.3	21.5	96	71	10	4	------	d a.
11	34.3	20.5	95	60	2	5	------	☊ a.
12	33.7	22	96	69	1	7	.3	☊ a. d p.
13	33.3	23.3	94	68	10	9	12.2	☊ a. ◪ ● p.
14	32.8	22.4	97	62	10	9	------	d a.
15	32.3	22.6	96	65	0	9	------	☊ a.
16	32.8	23	92	63	10	9	------	
17	30.8	22	96	71	1	9	------	☊ a.
18	32.5	22.5	96	75	10	9	1.5	☊ a. ↙ p.
19	30.5	23	89	74	10	10	.8	● a.
20	30.6	24	92	81	10	10	------	●° a.
21	32.5	23.7	96	68	10	7	------	
22	31.6	22.8	96	71	10	4	------	☊ a.
23	31.3	22	94	81	1	8	9.7	☊ a.
24	28.4	22.6	96	72	10	10	8.1	● a.
25	30.8	21.9	96	80	10	9	------	☊ a.
26	30.8	21.9	87	78	10	9	4.3	☊ a. ● p.
27	32.5	23	94	72	10	8	1	
28	30.8	23	96	79	10	7	------	● a.
29	32.8	22.8	85	71	10	6	------	
30	30.1	23	91	77	10	8	------	☊ a.
31	30.5	25	96	78	10	10	------	☊ a. ◪ p.
Mean	32.1	22.5	94.5	70.8	7.5	7.5	------	
Total	------	------	------	------	------	------	43.9	

ZAMBOANGA.
[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.6	22.8	91	71	6	2	------	☊ ≡° a.
2	32.1	22.9	87	74	9	7	------	≡° a
3	32.2	22.5	91	74	9	5	------	
4	31.9	21.6	95	67	8	9	------	≡ ☊° a.
5	32.6	21.8	89	63	10	8	------	☊ ≡° a.
6	32.5	23	90	56	10	5	------	≡ a.
7	32.4	21.9	85	69	1	2	------	☊ a.
8	32.1	23.5	87	74	8	3	2.5	◪ ● p.
9	32.1	23	93	54	3	2	12.4	☊ ≡° a.
10	30.4	22.4	96	78	2	2	------	● ≡° a.
11	32.2	21.9	89	77	3	2	------	☊ a.
12	32	23.5	89	75	2	2	.8	d ≡° ●° a. ↙ p.
13	31.9	23.4	89	67	8	9	.5	≡ a. ↘ ⊤ p.
14	30.7	23	94	72	9	8	------	●° a. d° p.
15	32.1	23	91	75	3	9	1	☊ ≡° a. p p.
16	32	23.5	85	69	7	3	------	
17	30	22.8	90	74	1	3	------	≡ ☊° a.
18	32	23.5	87	77	9	7	3.8	≡ a.
19	31	23.5	97	79	9	7	------	● a.
20	31	24.6	88	75	10	9	------	d° a. p.
21	29.6	23.6	91	74	9	9	------	≡ a.
22	32.2	23.5	94	68	5	4	------	≡ a.
23	31.4	22.4	86	73	2	9	15.2	≡ a.
24	29	22.4	98	80	10	10	10.2	● a.
25	29.4	22	89	75	3	3	------	☊ ≡ a. d° p.
26	30.4	21.5	90	63	3	9	8.4	☊ ≡ a. ● p.
27	32	23	95	53	9	9	------	
28	31.5	23.4	89	68	5	5	------	d° p.
29	31.1	23.3	84	70	10	4	------	d° a.
30	31.1	23.4	83	68	9	7	------	
31	28.4	22.4	94	78	9	10	------	≡ a.
Mean	31.3	22.9	90.2	70.6	6.5	5.9	------	
Total	------	------	------	------	------	------	54.8	

DAVAO.
[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.7	21.5	97	76	5	8	16.5	● p.
2	31.6	19.5	87	63	6	7	------	
3	30.2	21.1	96	69	6	7	------	
4	32.2	21	96	64	6	7	------	
5	31.5	20.3	95	67	6	7	------	
6	30.2	21	96	69	7	8	------	
7	32.3	20.7	95	64	6	5	------	
8	32.2	21.8	92	68	6	5	------	
9	32	21	95	70	6	5	------	
10	34.7?	21	96	62	6	7	------	
11	31.9	21	94	64	6	7	------	
12	30.7	21.5	88	78	7	8	------	
13	28.2	22	90	91	8	7	36.3	●² a. p.
14	29.9	21.2	96	76	9	6	36.1	●° a. ● p.
15	31.8	22	97	69	7	7	------	
16	32.9	21.9	96	64	6	7	------	
17	30.2	21.8	96	78	7	7	------	
18	31.7	22.4	96	65	6	7	6.4	●ᶜ p.
19	31.8	22.3	97	65	7	6	14.7	●° p.
20	26.8	21.8	98	96	8	9	19.1	●° a. ● p.
21	30.9	21.5	97	73	10	7	------	☋ p.
22	32.5	21.8	98	57	6	6	------	
23	32.2	22.8	94	64	5	6	6.1	●° ⊤ p.
24	31.5	21.6	95	73	7	8	------	
25	31.7	20.4	96	64	6	6	4.8	
26	30.7	22.4	96	73	5	8	14.7	●° a. ● p.
27	31.7	21.5	96	69	7	8	5.8	●° p.
28	32.2	21.7	95	73	9	6	------	
29	32.8	20.4	95	62	5	7	------	
30	32.1	21.7	96	60	5	5	------	
31	33.3	22.2	96	63	6	5	------	
Mean	31.4	21.4	95.1	69.3	6.5	6.7	------	
Total	------	------	------	------	------	------	160.5	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	21	93	67	4	5	7.6	♌ a. ◹ ● p.
2	32	20	93	65	2	4	------	♌ a.
3	33.6	20.6	91	71	4	4	------	
4	31	21.6	93	63	5	8	------	
5	32	20	91	63	3	4	------	♌ a.
6	32	22.4	92	66	10	4	------	
7	32	20.1	88	62	2	7	20.3	♌ a. ●² p.
8	32.6	20.4	95	69	3	3	17.8	♌ a. ●² p.
9	33.2	21.6	93	58	2	5	10.2	♌ a. d ●² p.
10	32	21.2	91	59	2	4	------	♌ a.
11	33.1	20.4	93	60	3	4	------	♌ ≡° a.
12	32	22	93	64	6	10	7.6	d a. p. ● p.
13	31.2	19.2	93	68	8	10	------	d p.
14	30.6	21.8	96	80	9	10	2.5	d ●° p.
15	32	23.4	93	63	5	10	12.7	● p.
16	32	22	93	49	1	2	------	
17	32.4	21.2	92	64	1	4	2	♌ a. p d p.
18	32.1	21.6	93	63	2	6	12.7	≡ a. ◹ ● d p.
19	31.6	22.1	89	68	2	10	------	≡ a. d ●° p.
20	30	21.6	93	69	3	9	7.6	♌ d a. ● p.
21	32	20.2	93	61	10	10	------	d a. p.
22	32	21.2	93	58	2	2	------	♌ a. ┤ d p.
23	31.6	21.2	93	82	3	10	4.6	≡° a. ● d p.
24	30	22.4	90	75	4	10	------	♌ a. ◺ p.
25	30.8	20.6	93	69	2	3	------	≡ᵕ a. d ◺ p.
26	31.6	21.6	95	65	2	10	22.9	♌ a. ●² p.
27	31	21	93	72	8	3	2.5	d ● p.
28	31.6	21.2	89	59	2	8	2.5	≡ a. ●° p.
29	31.1	21.8	97	69	4	2	11.4	♌ a. ◺ ● p.
30	31.2	22.4	93	67	3	4	------	♌ a. ◺ p.
31	32	21	93	65	1	2	------	♌ a.
Mean	31.8	21.3	92.6	65.6	3.8	6	------	
Total	------	------	------	------	------	------	144.9	

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	20.8	96	68	1	7	------	♌² a. ◺ p.
2	30.1	18.6	97	68	3	8	------	♌² ≡ a. ⊕ p.
3	31.5	20.6	97	64	8	9	------	◺ p.
4	32	21.2	91	64	8	5	------	♌² ≡ a.
5	31.9	19.8	92	61	3	7	1.5	♌² ≡ a. ⊕ d p.
6	32	21.9	96	62	8	8	------	⊕ p.
7	29.1	21.6	92	78	9	9	5	d² a. p.
8	30.5	21.1	92	79	4	9	------	
9	30.3	20.9	92	67	0	5	------	♌² ≡ a. ◺° p.
10	32.3	19.9	94	57	3	2	------	♌² ≡ᵕ a.
11	32.4	20.9	94	60	2	4	------	
12	32	20.7	93	75	7	9	------	d° p.
13	30.4	22.9	98	72	10	9	------	d° p.
14	30.7	23.1	89	74	8	9	3.8	◺° d p.
15	30.7	22.5	93	68	6	4	------	◺ ◡ p.
16	32.1	21.1	89	62	3	2	------	♌² ≡ a.
17	31.2	21.9	90	76	8	9	------	◹ a. ◒ p.
18	32.1	21.9	94	73	3	4	5.1	♌° ≡° a. d p.
19	30.8	22.9	97	72	7	8	------	◡ ◺° p.
20	30.5	22.7	94	87	9	10	5.1	♌° d° a. d p.
21	30.4	20.6	97	71	8	8	------	d° p.
22	29.8	21.2	95	70	4	6	7.6	d p.
23	29.8	22.9	98	66	10	9	.3	d° a. ◒ p.
24	30	22.9	95	74	4	9	------	♌ ≡ᵕ a. ◒ p.
25	30.2	21.5	93	72	2	4	------	♌ ≡ a.
26	30.5	23.3	95	70	7	9	------	d p.
27	32	21.3	95	69	2	4	------	♌² ≡ a.
28	30	21	92	75	4	5	3.8	♌² a. d² p.
29	28.8	22.7	94	79	10	9	------	d p.
30	30.2	23.6	93	77	9	8	------	
31	31.8	21.3	95	70	2	8	------	♌² ≡ a.
Mean	30.9	21.6	93.9	70.3	5.5	7	------	
Total	------	------	------	------	------	------	32.2	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	22.6	87	63	10	7	------	
2	30.5	24.5	89	71	8	9	------	○ p.
3	29.7	24.6	85	71	10	10	------	♌ a. ○ p.
4	31.6	24.6	84	70	8	7	------	♌ a. ○ p.
5	31.9	25.2	84	77	10	7	------	
6	31.9	23.6	84	71	10	6	52.8	
7	29	23.8	87	74	10	10	------	● a. p.
8	30.6	24.7	88	67	10	9	6.9	● a.
9	29.3	24.6	88	70	4	7	------	● a.
10	31	24.5	86	71	10	6	------	
11	30.7	24.3	91	75	9	7	------	
12	30.5	24.6	88	72	4	8	------	
13	30.2	25.1	88	70	5	6	------	
14	30.7	24.1	90	70	10	7	------	
15	30.7	24.8	86	70	9	8	------	
16	------	------	------	------	------	------	------	
17	------	------	------	------	------	------	------	
18	------	------	------	------	------	------	------	
19	------	------	------	------	------	------	------	
20	------	------	------	------	------	------	------	
21	------	------	------	------	------	------	------	
22	------	------	------	------	------	------	------	
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
31	------	------	------	------	------	------	------	
Mean	30.7	24.4	87	70.8	8.5	7.6	------	
Total	------	------	------	------	------	------	------	

BUTUAN.

[ϕ=8° 56′ N; λ= 125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	22.1	96	73	2	5	1.8	♌ ● a.
2	28.2	22.1	96	71	10	8	2	d a.
3	28.6	22.6	94	79	8	9	1	♌ a.
4	29.6	21.6	96	62	8	4	------	● a.
5	29	21.5	95	66	2	8	13.5	♌ a. d ● p.
6	29.6	22.5	96	69	7	8	2.3	♌ a. d° p.
7	26.3	22.1	97	91	9	8	28.9	● a. p. d p.
8	27.1	22.4	96	82	7	9	1.8	♌² ≡² a. p° p.
9	28.1	22.9	95	87	4	7	1.3	♌² d a. ● p.
10	29	23.2	92	70	6	4	1	♌² d a.
11	29.7	23.2	97	63	9	3	1.8	● a.
12	27.6	23.2	97	83	7	9	2.8	● a.
13	28.2	23.1	97	68	7	8	2	● a. p. d p.
14	25.6	23	96	92	10	10	38.1	● a. p.
15	27.6	22.9	97	77	10	6	9.9	● a. p.
16	28	23	95	77	7	8	4	♌ a. ● a. p.
17	27.6	23	97	84	7	7	7.1	♌² ● a. d p.
18	28.5	22.7	98	71	7	7	.8	≡ a. d p.
19	28.5	22.9	96	84	7	7	24.4	♌² a. ● p.
20	27	21.5	97	94	10	10	26.7	● a. p. ≡ ◡ p.
21	28.7	22.1	94	89	8	10	2.1	♌² a. ● ┤ p.
22	27.7	22	98	78	7	9	19.6	♌² ≡² a. ● p.
23	25.6	22.7	98	92	10	10	15.7	● a. p.
24	28	21.4	97	78	6	10	3.8	♌² a. ● p.
25	27.8	21.5	98	89	5	8	11.4	●° a. ● ┤ p.
26	25.2	22.1	97	91	10	10	8.9	● a. p.
27	27.5	21.2	97	77	8	7	2.5	♌² d a. ● p.
28	27.5	21.4	97	77	6	8	21.3	♌² a. ● ◠ p.
29	27.5	22.6	97	85	7	9	2.6	♌² a. ● p.
30	28	22.6	98	77	6	7	2.8	♌² a. ◠ ● p.
31	28.7	22.5	96	72	5	6	3	♌ ≡ a. ● p.
Mean	27.9	22.4	96.4	79	7.2	7.7	------	
Total	------	------	------	------	------	------	264.9	

METEOROLOGICAL DATA, ETC.—Continued.

YAP (WESTERN CAROLINES).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.3	24.1	91	67	4	5	1.5	● a.
2	32.5	24.4	88	66	4	1	8.1	☊° a. ●° p.
3	31.5	24.7	91	84	6	10	14.7	●² a. ● p.
4	31.8	23.8	80	71	5	5	3.3	○ a. d° ●° p.
5	31.5	24	84	68	8	6	3	● a. p.
6	32.4	24	89	69	8	4	2.8	● a. d p.
7	32	23.4	83	68	6	4	2.8	● a. ○² p.
8	31	24.8	84	70	9	4	------	●° ○° a. d° a. p.
9	29.8	23.7	79	74	6	9	1.3	☇° ●° a. d° p.
10	31.3	25.2	88	74	7	9	.8	●° a.
11	30.6	25.1	85	74	8	5	7.9	○ a. p. d ● p.
12	30.7	24.4	97	68	8	7	9.1	● d° a. p.
13	30.3	24.5	89	92	7	9	4.6	●° a. p.
14	31.6	23.8	80	71	3	1	.8	
15	31.3	23.5	85	68	7	8	------	●° a. ☋° p.
16	31.7	24.6	84	66	9	3	------	○² ☋ p.
17	32	25.7	82	67	9	5	------	○ a. p. ☌°☋°p.
18	32.8	25.4	84	61	6	3	2.5	○° ☌° ☋ p.
19	31.3	23.1	95	64	9	3	1.8	● a. ○ ☌° ☇ ☋
20	30.7	23.7	83	75	6	6	1.8	● a. ☌° ☋ ● p.
21	30.8	23.8	91	64	5	9	------	○² a ☋² p.
22	31.1	22.9	90	68	9	7	15.7	☊ a. ● ☇° ☇² ☋ p.
23	30.9	24.6	96	77	9	8	4.5	● a. p. d° ☋ p.
24	32	24.7	86	64	6	8	2.3	●° a. ○° ☌° ☌° ☋² d
25	31.9	23.3	93	63	5	7	1	● a. ○° ☋ p.
26	32.3	22.8	90	64	7	6	------	☋ ☊ a. ☋ p.
27	33.3	23.6	95	66	7	9	.3	☋ a. p. ☊ a.
28	32.3	24.7	94	68	4	6	.3	☋° ○ a. ◠ ●° ☇°
29	32.8	25	84	62	5	4	7.1	○° a. p° ● p.
30	30.9	24.1	97	81	8	4	42.9	● a. p. ○° ☨² p.
31	30.2	24.8	95	92	10	10	31	● a. p.
Mean	31.5	24.2	88.1	70.5	6.8	6	------	
Total	------	------	------	------	------	------	171.9	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	C6	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	22.3	94	66	10	4	------	d p.
2	30.2	22.3	93	69	10	10	------	d ≡ a.
3	29.8	22.4	95	77	10	10	30	d p a. d° ≡ ● p.
4	28.9	22.6	91	87	10	10	20.8	d ● p.
5	30.3	22.6	94	62	10	5	------	
6	30.5	23	93	63	10	10	13.2	☊ p² a. ☇ p.
7	30	22.8	93	77	10	10	------	◠ d ≡ a. d ☇ ² p.
8	29.5	22.1	90	80	10	10	------	◠² p.
9	29.6	23	88	73	10	10	------	
10	29	22.6	84	75	10	8	------	
11	29.6	23.4	95	77	10	10	------	p° a. d° ◠° p.
12	29	23.6	88	81	10	10	8.1	d° ≡ a. p² p.
13	29.1	22	91	79	10	4	------	☇ p.
14	30	21.6	82	82	10	10	19.3	◠° a. ● p ☇ p.
15	27.6	22.5	88	74	10	10	------	d a. p. ☾² ☇ p.
16	29	21.4	88	84	10	10	7.9	d a. d ≡ ◠² ☾² p.
17	29	21.2	95	79	10	10	5.6	p a. d° ≡ ☾ ☋° p.
18	28.5	22.3	91	92	10	10	49.5	d a. p. ● ≡ ☇ ☾
19	28	22.3	93	87	10	10	34.8	p a. ☇² ☋² ●² p.
20	28.2	23	91	84	10	10	------	d° a. d ☇² ☾ p.
21	29	22.6	95	77	10	10	------	☊² d° a. ☇° ☋ p.
22	29	21.4	93	78	10	10	27.9	p² d ☋ p.
23	30.2	22.6	93	69	10	8	3.6	p° p.
24	29.4	20.7	93	79	10	10	8.9	p p.
25	28.4	22.3	89	82	10	10	------	
26	29.5	23.1	89	63	10	6	------	
27	30	22.7	95	68	10	7	12.2	p p.
28	30	22	85	83	10	7	------	
29	29.6	23.2	91	81	10	10	------	d° a. d ◠° ☇ p.
30	30	24	91	63	10	10	------	
31	30	21.7	93	63	10	4	------	◠ a. d p p.
Mean	29.4	22.4	91.1	75.9	10	8.8	------	
Total	------	------	------	------	------	------	241.8	

SAN JOSÉ BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	22	91	66	6	3	------	
2	30.3	20.6	91	74	1	3	------	
3	31.8	21.7	88	58	3	10	1	● p.
4	31	21.5	91	68	3	3	------	
5	31.6	21.6	81	70	3	5	------	●° a.
6	32.6	22.1	86	48	4	2	------	
7	30.6	21.4	89	73	10	10	.3	d a.
8	32.5	20.9	90	66	5	10	------	
9	29.6	22.3	94	75	1	10	------	
10	31.2	20.5	91	66	1	7	------	
11	31.6	21.6	91	65	6	7	------	☊ a.
12	31.6	21.2	95	67	1	10	------	☊ a.
13	31.8	20.3	90	62	4	7	------	
14	31.9	20	83	70	3	10	------	
15	31.1	20.9	91	62	4	4	------	
16	31.5	20.6	92	60	1	1	------	
17	31.7	20.8	91	58	2	1	------	
18	31.4	21.2	90	67	6	6	------	
19	31.4	21.9	88	72	3	6	------	
20	28.7	23.3	91	78	10	10	------	d a. ☋ p.
21	31.7	21.5	93	61	3	1	------	◠ ☋ p.
22	32.3	22.6	87	61	10	3	------	
23	31.8	19.2	89	53	2	2	------	
24	31.7	20.3	86	59	6	3	------	☋ p.
25	31.7	21.6	87	64	5	4	------	
26	32.1	21	92	57	8	2	------	
27	31.9	21.6	90	62	3	8	.8	d° ●° p.
28	31.1	23	92	72	10	10	------	●° ◠ d a.
29	31	20.9	88	59	1	1	------	
30	30.3	21	82	72	10	10	8.4	● p.
31	29.9	21.8	94	84	10	5	4.6	d ● p.
Mean	31.3	21.3	89.5	65.5	4.7	5.6	------	
Total	------	------	------	------	------	------	15.1	

BORONGAN.

[$\phi = 11°\ 37'$ N; $\lambda = 125°\ 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	23.2	96	71	8	6	27.7	● ≡ a.
2	28.1	23.5	96	84	10	10	6.6	●² a. ●° p.
3	27.2	23.8	82	94	7	10	19.3	
4	29.8	23.8	90	79	9	6	34.8	● ≡ a.
5	30.1	23.3	93	83	9	8	10.2	●² a. ● p.
6	29.5	22.9	87	83	9	10	9.9	● a.
7	29.1	23.5	85	74	10	8	7.4	● a. p. ◠ p.
8	29.7	23.8	96	76	8	7	33.8	● a.
9	29.6	23.9	91	77	10	8	18.3	● a.
10	29.1	23.3	97	82	10	9	7.4	● a. p.
11	29.5	23.4	95	73	9	7	6.1	● a. p.
12	28.9	24.5	91	73	10	9	.5	● a.
13	29.6	22.2	96	60	9	4	------	☊ ≡ a.
14	30.1	20.7	96	67	8	8	22.4	☊ ≡ a. ● p.
15	29.5	22.4	97	71	10	10	4.6	● ≡ a.
16	29.2	22.4	96	76	8	6	46.2	● ≡ a.
17	28.1	23.2	97	77	10	9	13.7	●² a.
18	29.1	22.4	98	75	10	7	23.4	≡ a.
19	27.1	22.9	95	93	8	10	73.9	≡ ● a. ●² p.
20	30	23.7	93	91	6	10	84.3	●² á. ● a. p.
21	28.7	22.4	98	81	10	8	13.2	● a.
22	29.4	20.3	96	72	5	8	------	☊ ≡ a.
23	29.2	20.4	95	70	3	6	6.9	☊ ≡ a.
24	29.4	22.2	97	75	8	6	30.5	● a. p.
25	29.5	21.3	98	79	10	8	6.4	●² a. ● p.
26	29.3	22.2	94	83	9	7	41.9	● a.
27	26.1	22.1	94	80	10	10	167.9	●² a. p.
28	28.1	21.9	97	85	10	9	16.5	●² a.
29	28.3	23.1	96	91	8	10	3.6	●° a. d p.
30	29.7	22.9	96	72	10	3	9.7	● d a.
31	29.5	23	96	82	8	9	50.8	●² a. p.
Mean	29.1	22.7	94.3	78.4	8.7	7.9	------	
Total	------	------	------	------	------	------	797.9	

METEOROLOGICAL DATA, ETC.—Continued.

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	23.4	97	------	10	4	------	
2	------	------	------	------	------	------	3.8?	
3	29.8	24	98	------	10	9	5.1	
4	30.5	23.8	98	95	8	10	10.2	
5	29.2	23.8	98	81	10	8	26.4	
6	30.5	24	------	75	10	8	1	
7	30.2	24.2	88	75	10	8	.3	
8	27.2	23.2	91	94	10	8	4.5	
9	27.8	24.4	95	91	9	9	1.1	
10	30.6	23.6	98	81	9	9	1.3	
11	27	23.2	------	88	9	8	3.1	
12	30.5	23.8	------	80	7	9	------	
13	30.6	22	------	70	9	6	------	
14	29.8	22.5	------	72	8	6	------	
15	29.4	24.6	83	85	9	10	1.5	
16	28.8	22.6	98	------	9	9	3.3	
17	29.2	24.2	97	------	9	8	------	
18	28.2	24.2	98	------	10	9	5.3	
19	25.4	22.6	98	95	10	10	94	
20	23.8	22.8	99	98	10	10	37.6	
21	29.4	23	99	84	9	7	------	
22	28.5	23.2	------	82	9	8	------	
23	30.8	23.6	93	69	8	7	------	
24	28.4	23.4	91	84	8	8	------	
25	28.6	22.5	94	85	8	9	------	
26	28.4	23.6	91	81	10	10	1.5	
27	26	22.6	------	84	10	10	2	
28	29.2	23.4	95	80	8	8	------	
29	27.6	24	83	80	10	8	------	
30	27	23.4	97	98	10	10	15.5	
31	25	23.2	98	98	10	10	62	
Mean	28.6	23.4	94.7	84.2	9.2	8.4	------	
Total	------	------	------	------	------	------	279.5	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.6	24.2	92	79	8	6	11.9	p a. ● p.
2	27.8	23.8	77	79	8	6	1.5	● a. d ↙ p.
3	29.3	24.2	84	70	7	6	23.9	
4	28.7	23.8	92	83	9	7	------	●² a. d° ◠
5	29.5	24.4	88	89	8	9	4.3	● p.
6	29	24.5	87	79	8	7	11.2	p° a. ● p.
7	29.5	23.6	88	69	10	7	------	
8	29.2	24.3	88	71	7	8	1	d p.
9	27.3	24.2	92	90	8	10	9.9	●° a. p.
10	29.8	24.1	84	69	9	8	.3	p p.
11	29.2	24.5	87	94	7	8	3	p a. ● p.
12	29.3	23.7	89	74	10	7	------	● a.
13	29.1	24.1	84	68	7	6	------	
14	29	21.3	95	69	8	4	------	
15	29	23.3	76	64	4	6	17.8	
16	26.8	23.1	87	80	10	10	9.4	●² a. ●° p.
17	28.4	23.1	80	76	10	7	------	
18	28.3	23.1	85	70	10	10	------	d p.
19	26	23.4	76	98	10	10	55.3	●° a. ● p.
20	26.6	22.5	95	93	10	10	28.7	●° a. p.
21	28.1	23.3	91	81	10	9	1.3	●° a. p° p.
22	28.6	23.7	86	70	8	6	------	
23	28.7	22.3	89	74	0	5	------	
24	29	23	86	71	9	6	------	d p.
25	29	23.2	84	75	10	7	.3	d a. p° p.
26	28.5	23.3	83	70	7	9	------	
27	26.8	23.5	82	81	8	9	------	d a.
28	27.7	22.7	84	71	7	8	------	d p.
29	28.7	22.6	80	68	4	4	------	
30	27	20.7	82	91	3	10	14.5	● p.
31	25.6	22.5	87	89	10	10	25.1	●° a. ● p.
Mean	28.3	23.4	85.8	77.6	7.9	7.6	------	
Total	------	------	------	------	------	------	219.4	

LAOANG.

[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	22.3	98	79	3	3	14	● a. p.
2	27.7	22.6	99	83	9	9	14.8	● a. p.
3	29	24.8	84	76	8	8	46.5	● a. p.
4	28.5	22.9	97	97	8	10	30.5	● a. p.
5	29	23.4	89	87	5	6	12.7	● a. p.
6	29.3	23.1	93	85	7	8	7.6	● a. p.
7	29.3	22.7	87	69	7	8	9.4	● p.
8	28.6	22.6	86	80	7	8	19.8	● a. p.
9	29.6	23.8	96	78	9	7	.8	● p.
10	29.3	25	86	74	7	6	12.2	● a. p.
11	29.6	22.3	93	81	7	5	4.5	● a. p.
12	29.4	24.3	88	73	3	9	------	
13	30	21.5	98	75	8	4	------	
14	29.4	19.6	99	70	2	6	25.4	● p.
15	26	22	99	80	8	9	11.7	● a. p.
16	28.5	22.9	91	80	8	9	3.6	● a. ●° p.
17	27.9	23.5	82	95	6	10	13.8	● a. p.
18	28.2	23.7	94	88	9	9	12	● a. p.
19	28.9	23.3	94	84	10	4	103.4	● a. ●² p.
20	24.5	22.7	91	90	10	10	212	●² a. p.
21	29	22.2	92	77	10	7	10.7	● a. ●° p.
22	28.7	20.3	100?	89	8	8	------	
23	29.6	23.7	84	69	8	7	1.3	● p.
24	28.8	23.1	92	74	7	8	21.6	● a. p.
25	27.4	21.8	96	85	8	8	18.8	● a. p.
26	28.1	23.2	92	80	9	8	17.2	● a. p.
27	28.2	22	96	76	10	10	22.1	● a. p.
28	28.4	22.2	96	75	6	6	.5	● a.
29	28.1	24.2	87	78	4	8	39.4	● p.
30	28.6	23.4	97	85	9	5	28.5	● a. p.
31	28.1	23.9	93	84	6	6	53.6	● a. ●² p.
Mean	28.6	22.9	92.5	80.5	7.3	7.4	------	
Total	------	------	------	------	------	------	768.4	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	21.8	97	90	7	10	8.4	◠ ● a. p p.
2	31.6	21	90	88	9	8	1.8	d ● a.
3	30.9	21.8	98	91	7	5	1	d a. p² p.
4	31.5	20.8	91	90	8	10	18.5	p a. ● a. p.
5	22.5	21.5	92	82	9	7	3	p² a.
6	31.9	21.7	93	84	6	4	1.8	●° a.
7	32	21.4	79	76	6	4	------	d a.
8	31	21.7	82	82	6	7	5.9	p d a. ● p.
9	31.4	21	90	81	10	6	5.1	● a.
10	32	21.4	91	82	5	7	------	
11	32.1	23	98	84	9	8	.8	p ◠ p.
12	33	23.2	91	83	5	4	------	
13	33.3	23	95	84	4	2	------	
14	31.8	23.2	98	83	5	5	------	
15	31.5	21.5	86	82	6	4	2	p² p.
16	32.2	21.6	98	81	7	8	3.3	●² p.
17	31.8	21	98	82	7	9	5.9	p a. ● p.
18	30	21	98	88	10	10	34.3	d a. ● a. p.
19	29.8	19.6	97	81	10	10	49.5	● a. p.
20	29.5	19.9	98	82	10	10	41.9	┬ a. ● a. p.
21	30	19.7	95	80	10	7	------	d a.
22	31	20.1	99	75	6	5	------	
23	31.5	21	94	75	4	6	.3	◠ a. ● p.
24	30.6	21.8	96	91	7	6	------	
25	29.8	20.4	96	73	7	5	.5	p² ◠ a. ┬ p.
26	30.1	20.4	93	83	6	8	1	p² p.
27	31.8	21.6	86	74	10	10	12.7	● a. p.
28	32	21.8	98	73	4	5	------	
29	31	19	82	65	2	6	------	
30	30.6	19.9	91	84	10	7	5.3	p² a. ● p.
31	30.4	20.7	93	90	10	10	15.5	d a. ● a. p.
Mean	31.3	21.2	93	81.9	7.2	6.9	------	
Total	------	------	------	------	------	------	218.5	

METEOROLOGICAL DATA, ETC.—Continued.

SUMAY, GUAM (Ladrones Islands).
[$\phi = 13° 24'$ N; $\lambda = 144° 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.4	24.4	88	92	7	10	11.4	
2	28.8	24.2	87	70	2	1	------	
3	28.2	24.4	87	73	2	6	2.5	
4	28	24	88	78	3	7	3.8	
5	28.4	23	92	73	10	7	8.9	
6	29	23.8	90	68	6	7	4.5	
7	28.8	24	88	69	6	4	1.5	
8	28.8	24.8	83	68	2	4	.8	
9	28.6	24	88	74	5	10	3.3	
10	27.6	24.4	79	70	8	7	------	
11	27.6	24.2	83	72	2	9	1.3	
12	28.6	24.6	83	73	3	8	------	
13	28.6	24.4	80	66	2	4	------	
14	28	24.6	87	67	3	6	7.7	
15	29	25	83	73	3	8	.8	
16	29	23.8	83	66	8	3	------	
17	28.4	23.8	83	66	7	8	------	
18	29.4	24.8	84	70	6	2	------	
19	28	23.8	82	75	2	6	2.5	
20	28.6	23.8	80	68	2	2	------	
21	28.4	23.4	82	66	1	3	------	
22	28.4	23.4	79	70	10	9	------	
23	29	24.8	84	66	2	7	------	
24	29	24.6	83	70	8	6	------	
25	28	24.4	87	74	4	8	3.8	
26	30	24.4	85	73	3	5	3.8	
27	28.2	24.6	88	76	10	6	5	
28	29	24.4	87	66	7	4	1.8	
29	29	24.8	83	68	8	3	------	
30	29.4	24.6	85	63	2	4	------	
31	28	24.4	80	72	10	10	------	
Mean	28.6	24.2	84.5	70.8	5	5.9	------	
Total	------	------	------	------	------	------	63.4	

CALAPAN.
[$\phi = 13° 25'$ N; $\lambda = 121° 11'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.7	24	97	74	10	6	3.6	●° p.
2	29.1	24.6	88	72	10	6	5.1	p p.
3	29.5	23	98	68	10	9	4.4	● a. p° p.
4	29.5	24	93	81	10	9	3.8	● ⊤ p.
5	29.6	24	86	79	10	4	------	
6	29.5	24	94	81	10	5	2.8	● p.
7	29.3	24.5	83	67	8	3	.5	● p.
8	28.6	23	94	77	10	10	6.6	p° a.
9	29.4	24	92	78	10	8	3.6	d p° a. p p.
10	29.6	24	93	76	8	3	------	
11	29.6	24.6	88	72	10	4	1	
12	30.3	24.1	89	61	10	4	2.8	p a.
13	29.4	22.5	97	64	9	3	------	
14	29.2	20	86	60	8	7	------	
15	29.1	23.4	87	66	8	8	1.3	p° a.
16	27.5	23.4	81	76	10	9	------	p° a. p.
17	28.2	23.8	73	73	10	10	------	
18	29.3	23	81	66	8	4	6.9	
19	28	21.9	95	69	10	10	18.8	d° a. ● a. p.
20	25	22.4	91	92	10	10	8.1	d° a. ●° a. p.
21	28.9	20.1	97	75	10	4	3.3	d° p° a. ●° p.
22	29.7	22.2	98	61	8	5	.5	☌ a. d ☋ p.
23	29.5	21.6	91	61	5	8	------	☋ ☌ p.
24	30.1	22.6	97	63	10	7	------	☋ ☌ p.
25	28.4	22.8	88	75	10	9	.8	p° a. d° ☌ p.
26	28	23.5	82	69	7	7	4.8	● p.
27	27	22.1	80	69	10	9	.8	d° a. p° p.
28	28.6	21.4	91	59	10	9	1	d a. p° p.
29	29	20.5	94	71	8	10	------	
30	28.6	20.5	93	75	9	10	------	
31	26.5	21.8	83	82	10	10	1.3	d° a.
Mean	28.8	22.8	89.7	71.4	9.2	7.1	------	
Total	------	------	------	------	------	------	81.8	

VIRAC.
[$\phi = 13° 35'$ N; $\lambda = 124° 14'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	23.9	86	75	9	8	8.1	≡ a. ☾ ●° a. p. d
2	29.5	22.4	81	74	9	8	5.1	●° a.
3	32.2	23	83	75	8	8	8.2	d a. ●° a. p.
4	32.2	24.5	87	73	9	8	7.9	● ☾ a. ●° p.
5	32.6	24.6	80	72	5	8	1.8	☾² ●° a. d ☌ p.
6	32.6	24.2	80	71	6	5	1.1	☾ a. ●° a. p.
7	31.5	24.3	78	74	7	7	.3	d° ●° p.
8	32.4	24.7	78	68	5	7	23.1	☾² ●° p.
9	29.4	22.9	87	77	10	9	.8	● a.
10	31.5	25.4	78	71	2	5	------	d° p.
11	31.3	25.3	80	72	8	8	1.1	☾ d a. ●° a. p.
12	31	24.5	81	64	2	5	------	
13	30.2	20	95	68	5	7	------	
14	30.2	20	92	62	8	8	------	
15	31.6	23.4	76	56	8	8	.8	d ●° p.
16	30.2	22.8	89	62	10	7	2.1	☾² ●° a. d² p.
17	30.9	23.5	75	61	5	8	------	☾ p.
18	27.1	23.1	83	96	10	10	24.9	d° a. ●° a. p.
19	29	22.4	96	90	10	10	33.6	d a. ≡ ●° a. p.
20	29.1	22.6	90	74	10	9	2.5	● ☾ a. ●° p.
21	31.5	22.9	84	65	10	10	.5	d° ☾ a. ☋° p.
22	30.7	20.2	95	63	3	6	2.5	☋ ☾° p.
23	30.4	21.5	95	61	8	4	------	● a. ☋ ☾° p.
24	31.3	21.4	93	80	7	9	1	≡ a. ●° p.
25	31.6	22.5	88	71	10	8	5.8	d° a. d p.
26	27.5	22	96	77	10	10	12	● ≡ a. p. ☋ p.
27	28.6	22.4	79	66	8	8	------	☾ a. ≡ d° a. p.
28	30	21.6	82	66	7	8	.3	☾² a. d p.
29	30	21.5	79	56	2	4	------	
30	26.6	23.1	90	80	10	10	25.9	☾●° a. ⊤ ≡ d ●
31	28.6	22.5	86	83	10	8	20.6	●° ☾ a. p. d p.
Mean	30.4	22.7	85.2	71.1	7.5	7.7	------	
Total	------	------	------	------	------	------	190	

NUEVA CACERES.
[$\phi = 13° 37'$ N; $\lambda = 123° 11'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	20.8	98	85	7	6	.3	
2	30	22.8	97	82	8	7	------	
3	31.5	22.6	91	82	5	6	------	
4	30.3	22.6	98	94	8	9	4.6	●° d p.
5	30.5	21.8	98	86	7	7	4.6	p° a.
6	30	22.5	95	89	6	8	------	p° a.
7	30	22.3	97	85	6	8	1	●° p.
8	29.6	20.5	100?	94	7	10	.5	
9	31	22.2	98	75	9	9	------	
10	30.6	20.6	98	84	6	7	------	
11	32	19.2	98	92	5	10	.5	d p.
12	31	19.8	98	80	3	5	------	≡² a.
13	30.7	17.2	98	61	5	6	------	≡ a.
14	29.5	19	100	66	3	8	------	≡² Ω a.
15	30.1	21	88	60	7	8	------	
16	28	21.4	93	77	9	9	------	
17	28.8	21.1	91	73	7	8	1.3	p° p.
18	28	22	89	70	8	9	2	
19	24.5	22	97	90	10	10	13.4	d a. p. ●° p.
20	26.4	21.9	97	90	10	10	40.1	d a. ●° a. p.
21	29.1	21.5	99	82	10	8	2	d ●° a.
22	29.5	19.6	100	66	7	5	------	≡° a.
23	30.5	18.4	96	81	6	7	------	
24	30	20.9	96	84	5	6	------	
25	29.4	21.6	97	85	8	8	2.5	p° p.
26	29	21.2	91	95	5	9	.4	d p.
27	27	20.7	97	85	9	9	------	
28	27.5	20.5	96	89	9	8	------	☾ d a.
29	29.2	20.2	96	78	7	6	------	
30	26	20.8	93	97	8	10	18.5	d a. p° p.
31	25	20.9	98	95	10	9	14.1	d a. p° p.
Mean	29.2	21	96.1	82.3	7.1	7.9	------	
Total	------	------	------	------	------	------	105.8	

METEOROLOGICAL DATA, ETC.—Continued.

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	21.2	93	62	7	5	------	
2	30.4	21.5	90	69	9	7	------	
3	31.2	19.8	89	63	1	7	------	
4	32.8	22.1	93	59	9	6	1.1	d a. p p.
5	32.8	22	88	64	6	3	------	⌒ p.
6	30.8	20.5	95	71	5	6	.3	d p.
7	31.4	20.6	89	54	4	4	------	
8	31.8	18.6	95	62	9	7	.3	
9	31.6	20.6	96	59	4	5	------	d a.
10	32.3	21.7	93	61	4	3	------	
11	32.2	20	96	57	4	3	------	
12	33.1	21	91	57	7	5	------	
13	32	19.6	93	55	4	5	------	
14	31.7	17.3	94	60	3	3	------	
15	31.8	18.9	93	55	9	5	------	
16	30.5	20.6	88	64	4	6	------	
17	31.9	19.2	88	56	4	5	------	
18	32.8	16.1	91	51	2	4	------	
19	28.8	20.8	86	62	5	7	------	
20	27.8	20.9	89	82	9	7	.6	d a. p.
21	32.8	21.5	97	60	6	5	------	d a.
22	32.9	21.2	91	60	4	6	------	
23	32.3	19.1	94	53	3	6	------	
24	32	19.4	95	76	4	9	1	d p.
25	31.3	18.3	96	67	7	6	------	↙ p.
26	31.7	17.2	96	58	3	6	.3	↙ d p.
27	29.8	20.7	91	55	6	6	------	
28	31.3	18.4	87	51	6	7	------	
29	29.8	16.4	96	58	1	7	------	
30	28.8	15.6	95	65	3	9	------	
31	29.4	20.6	80	68	9	9	------	
Mean	31.4	19.7	91.9	61.1	5.2	5.8	------	
Total	------	------	------	------	------	------	3.6	

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.4	20.2	98	68	3	7	------	≡ a.
2	28.2	20.1	98	68	7	5	------	≡ a.
3	27.4	19.8	97	70	8	7	1.3	● p.
4	27.7	19.7	98	69	10	8	5.1	● a.
5	28.4	20.2	98	67	5	7	------	⊃ ≡ a.
6	28.8	20.5	98	67	7	8	------	≡ a.
7	28.8	20.3	99	66	6	5	------	⊃ ≡ a.
8	29.6	20	98	65	8	8	------	d p.
9	29.8	20.4	98	64	8	8	------	⊃ ≡ a.
10	29.6	20.3	98	66	9	6	------	⊃ ≡ a.
11	30.1	20.4	98	60	7	5	------	≡ a.
12	30.3	20.3	97	61	5	2	------	⊃ ≡ a.
13	30.6	20.4	98	61	7	8	------	≡ a.
14	30.7	21	98	60	6	7	------	⊃ ≡ a.
15	30.5	20.7	98	60	8	8	3.3	⊃ ≡ a. ● p.
16	30.2	20.6	98	60	7	7	------	≡ a.
17	30.5	21	97	61	5	8	------	⊃ ≡ p° a.
18	30.3	20.6	98	61	3	7	------	≡ a.
19	30.3	20.9	98	62	5	7	------	⊃ ≡ a.
20	30	20.6	97	61	8	8	5.6	⊃ ≡ p° a.
21	30.2	20.4	97	59	10	8	------	● a.
22	30.1	20.8	98	59	5	6	------	≡ a.
23	30.4	21	97	59	7	8	------	≡ a. d p.
24	30.4	20.6	98	58	8	8	------	⊃ ≡ a.
25	30	20.5	98	58	7	5	------	
26	30	20.8	97	58	3	2	------	≡ a.
27	30.2	21	98	59	7	8	------	≡ a. d p.
28	30.4	21.1	98	59	6	7	------	⊃ ≡ a.
29	29.7	20.6	98	59	5	8	------	d p.
30	30.5	21	98	59	8	7	------	⊃ ≡ a.
31	30.6	21	98	59	2	6	------	
Mean	29.8	20.5	97.8	62	6.5	6.7	------	
Total	------	------	------	------	------	------	15.3	

SAN ANTONIO.

[ϕ=14° 22′ N; λ=121° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	26.8	------	97	78	7	6	1.3	p p.
2	29	20	89	80	7	6	5.8	
3	25.8	------	97	84	8	6	25.9	p ⌣ a. ● p.
4	26.2	------	96	95	8	8	31.8	● a. p.
5	29.2	18.7	96	82	9	6	.5	p ⌒ p.
6	26	20.5	89	70	9	6	2.5	p p.
7	26	------	87	80	5	7	4.1	⌒ a. p p.
8	27.2	------	79	92	8	6	8.1	● p.
9	27.3	------	93	80	9	6	6.4	● a. ⌒ a. p.
10	28.6	------	94	83	8	6	1.3	p p.
11	29	20.2	94	72	9	6	------	
12	27.8	18.3	94	78	4	7	------	⌒ a.
13	28	19.3	89	70	7	9	------	
14	30	20.2	84	65	8	6	------	
15	26.3	18	99	77	7	6	17	p p.
16	24.3	17.8	86	88	9	8	1.3	p a. ↙ p.
17	27.3	17.2	82	76	9	6	------	
18	27.3	17.7	86	66	7	6	------	⌒ p.
19	27.3	18.4	93	74	8	6	8.1	● p.
20	24.2	18.2	98	89	9	7	5.3	⌒ a. p a. p.
21	26.4	17.3	98	82	6	6	7.9	● a.
22	30	20	97	90	9	6	------	⌒ p.
23	29.3	19	95	77	7	6	1.3	p p.
24	30	19	95	77	8	4	------	⌒ a.
25	26.7	19.3	93	76	7	6	------	⌒ p a. p.
26	26	18.6	93	94	7	6	7.1	⌒ p p.
27	24.2	18.4	95	81	9	5	1.3	p a.
28	26.8	18	84	74	6	6	------	
29	26.3	17	86	79	8	6	------	
30	25.6	17	87	87	6	7	3.8	
31	23.7	16.4	91	87	7	8	17	p a. ● a. p.
Mean	27.1	18.5	91.5	80.1	7.6	6.3	------	
Total	------	------	------	------	------	------	157.8	

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.9	20	96	52	5	3	------	⊃ a.
2	33.7	20.7	91	50	10	5	------	⊃ a.
3	32.6	19.6	91	56	8	10	------	⊃ a. d° p.
4	33.2	20.4	92	62	9	10	------	⊃ a. ⌒ d° p.
5	33	21.6	93	54	10	5	------	
6	33	18.6	93	48	10	6	------	⊃ ≡ a.
7	32.2	18.5	97	37	4	5	------	⊃ a.
8	32	16.2	95	42	10	2	------	⊃ a.
9	32.6	20.1	95	54	10	2	------	⊃ a.
10	32.8	20	92	51	9	5	------	⊃ a.
11	32.8	19.7	95	47	10	3	------	⊃ a.
12	32.5	18.4	96	51	10	4	------	⊃ a.
13	32.9	18	95	46	3	2	------	⊃ a.
14	31.8	17.7	98	49	4	4	------	⊃ ≡ a.
15	32.3	18	95	53	3	8	------	⊃ a.
16	31	19.4	82	52	5	9	------	⊃ a.
17	31.6	17.3	95	43	5	3	------	⊃ a.
18	31.5	16.6	94	42	3	4	------	⊃ a.
19	31.5	18.2	95	49	9	4	------	⊃ a.
20	29.3	21.1	87	55	10	9	------	d° a. p.
21	33	20.2	96	54	4	10	------	⊃ a.
22	33.3	20	96	57	10	9	------	⊃ a. d° p.
23	32	21.2	96	68	5	9	------	⊃ a. d° p.
24	33.2	19.9	94	48	4	5	0.8	⊃ a. d° p.
25	32.6	19.7	93	48	5	4	------	⊃ a.
26	31.7	16.4	94	54	4	2	------	⊃ a.
27	30.4	19.3	75	44	2	4	------	⊃ p.
28	31.7	15.8	95	44	2	3	------	⊃ ≡ a.
29	32.7	16.4	96	39	3	2	------	⊃ a.
30	32.3	16.4	96	45	4	4	------	⊃ ≡ a.
31	31.9	18.7	69	46	4	5	------	⊃ a.
Mean	32.3	18.8	92.5	49.7	6.3	5.2	------	
Total	------	------	------	------	------	------	.8	

METEOROLOGICAL DATA, ETC.—Continued.

BALER.

[ϕ=15° 40′ N; λ=121° 34′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	21.5	96	79	10	8	9.6	☌° a. ☔.
2	------	23.6	93	84	10	7	.3	⊕ p.
3	------	22.1	88	90	10	10	1.3	
4	------	22.1	87	96	10	10	6.1	
5	------	22.5	95	81	10	10	------	☌° a. ☔ p.
6	------	22.6	95	------	10	------	------	
7	------	21.2	91	75	10	3	------	
8	------	18.3	95	66	10	4	.5	⊕ p.
9	------	23.2	90	82	10	9	1.3	● a. ⊕ p.
10	------	23.6	83	80	10	10	3.3	☌ a. ☾ ● p.
11	------	22.4	96	77	10	4	.3	
12	------	21.5	95	69	10	9	------	⊕ p.
13	------	21.5	95	84	10	10	------	⊕ p.
14	------	17.9	92	57	10	10	1.3	
15	------	19.4	93	85	10	10	2	☌° p.
16	------	23	72	73	10	10	1.5	☌° a. ☍° p.
17	------	20.7	92	66	10	4	------	⊕ p.
18	------	19.4	94	67	10	3	------	⊕ ☌° p.
19	------	22.7	83	77	10	10	------	
20	------	20.7	93	72	10	10	3.6	☌ a.
21	------	22.1	95	92	10	10	.5	☌° a.
22	------	22.2	98	85	10	10	1	☌° ☿ a. p. ☾ p.
23	------	22.1	91	82	10	10	------	☌° a.
24	------	21.3	95	88	10	9	3.3	☌° p.
25	------	20.4	95	70	10	9	------	⊕ p.
26	------	16.2?	90	73	10	9	------	
27	------	21.5	74	63	10	10	------	☿ a.
28	------	17.6	92	64	10	5	------	⊕ ☿ p.
29	------	19.1	90	66	10	3	------	⊕ p.
30	------	19.8	78	56	10	7	------	⊕ p.
31	------	21	82	73	10	10	------	
Mean	------	21.1	90.3	75.7	10	8.1	------	
Total	------	------	------	------	------	------	35.9	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	20.7	95	72	1	2	------	☊ a.
2	30.4	21.2	95	73	3	6	------	☊ a.
3	30	20.6	95	68	2	3	------	☊ a.
4	30.2	20.8	87	72	2	2	.8	☊ a. ☽° ☍° p.
5	31.7	22.4	94	60	10	3	------	☊ a.
6	30.7	20.8	95	70	2	2	------	☊ a.
7	30.1	20.6	95	61	3	2	------	☊ a.
8	29.7	18.4	91	64	4	2	------	☊ a.
9	30.6	18.2	96	66	2	3	------	☊ a.
10	32	19	92	51	2	1	------	☊ a.
11	30.6	18.4	90	58	2	1	------	☊ a.
12	30.9	19.8	94	67	2	1	------	☊ a.
13	30	19	92	65	1	1	------	☊ a.
14	30.2	19.9	95	59	2	2	------	☊ a.
15	30.1	19.9	91	61	2	5	------	☊ a.
16	30.6	19.6	93	60	2	2	------	☊ a.
17	29.7	18.8	97	56	3	1	------	☊ a.
18	29.4	17.4	94	65	3	2	------	☊ a.
19	29.6	18.4	94	70	3	4	------	☊ a.
20	28.6	22.2	86	64	8	10	.8	☌° a. p. ☍° p.
21	30.4	20.7	93	68	7	5	23.1	☉° a. ● ☽ p.
22	29.6	21.5	98	70	9	3	------	● a.
23	29.5	22.2	84	70	3	2	------	☊ a.
24	29.9	22.5	94	67	4	2	------	☊ a.
25	27.5	21.4	91	68	5	3	------	☊ a.
26	28.2	17.4	92	74	2	2	------	☊ a.
27	28.6	17.9	94	61	1	2	------	☊ a.
28	28.7	17.8	92	65	2	2	------	☊ a.
29	28.7	17.4	94	66	1	2	------	☊ a.
30	28.9	18.2	97	62	2	2	------	☊ a.
31	29.6	17.4	90	52	1	2	------	☊ a.
Mean	29.8	19.7	92.9	64.7	3.1	2.6	------	
Total	------	------	------	------	------	------	24.7	

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	18.2	98	61	3	3	------	☊ a. ☐ p.
2	29.1	21.6	95	82	10	10	6.8	☿ ☄° a. p.
3	26.2	19.8	98	86	10	10	4	☿ ☍° a. ☿ p.
4	27.8	19.6	99	80	10	10	15	☌ a. ●° ☿ p.
5	30.1	20.3	98	70	10	9	.3	☰ ⊕ a. ☿ p.
6	31.8	18	98	56	3	5	------	☊ a.
7	30.3	17.6	96	53	7	6	------	☊ ☌ a. ○ p.
8	30.1	15.3	99	54	2	2	------	☊ a.
9	27.6	19.7	95	75	10	10	1.3	☿ a. ☿ p.
10	31.6	18.6	98	54	4	3	------	☊ a.
11	30.6	18.2	96	65	10	6	------	☊ a.
12	29.4	18.4	96	63	6	8	------	☊ ⊕° a.
13	31	16.8	96	54	4	4	------	☊ a.
14	30.4	17.9	91	55	10	6	------	
15	25.7	17.7	96	73	10	9	2.8	☿ a.
16	27.5	16.8	97	60	7	4	------	☊ a. ☰ a.
17	29.7	18.1	95	51	10	3	------	
18	28.3	17.1	99	64	10	8	.3	☊° ☰ a. ☿ p.
19	25.3	18.4	97	77	10	10	5.8	☿ a. p. ☐ p.
20	26.5	18.7	97	67	10	10	------	☌° a. ⊕° ☍ ☿ p.
21	28.8	19.1	94	68	10	9	------	☌° ☍ ☿ p.
22	28.3	20.9	94	74	10	10	1.3	☌° a. p.
23	28.8	20.1	96	78	10	8	.5	☿ a. p. ☐ p.
24	29.1	20.2	96	69	10	9	5.3	☿ a. p. ☐ ●° p.
25	29	19.6	97	58	10	7	------	☿ a.
26	25.8	17.7	93	71	10	9	------	☽° ☌° a.
27	26.9	16.7	93	68	10	9	------	☌° a. p.
28	27.2	16.8	97	61	10	8	------	
29	27.7	18.8	95	67	10	9	------	
30	27.4	17.2	95	66	10	10	------	
31	24.2	17.9	91	77	10	10	1	☌° a.
Mean	28.5	18.4	96	66.4	8.6	7.5	------	
Total	------	------	------	------	------	------	44.4	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	22	81	67	0	2	------	☊ ☰ a.
2	30	23	83	51	8	9	1.3	☊ ☰ a. ☿ ☍° p.
3	29.7	21.5	78	64	1	1	------	☊ ☰ a.
4	29.5	21.6	73	60	1	4	------	☊ ☰ a.
5	29.7	24.2	81	69	10	6	------	☽° ☌° d a.
6	29.7	23.5	81	67	9	2	------	☊ a.
7	29.5	21.5	79	67	4	5	------	☊ ☰ a.
8	28.2	19.5	78	66	2	1	------	☊ ☰ a.
9	28.6	19.7	78	65	1	4	------	☊ ☰ a.
10	29.8	20.9	78	59	2	0	------	☊ ☰ a.
11	29	20	80	63	0	1	------	☊ ☰ a.
12	29.7	21.6	83	64	4	0	------	☊ ☰ a.
13	29.4	20.8	82	61	1	0	------	☊ ☰ a.
14	29.2	20.6	81	61	2	0	------	☊ ☰ a.
15	27.8	19.9	76	63	3	8	1	☊ ☰ a. p p.
16	28.6	20.7	68	63	1	3	------	☊ a.
17	29	20.5	76	55	4	0	------	☊ a.
18	28.7	19.4	77	53	3	1	------	☊ ☰ a.
19	29.2	19.5	77	57	0	4	------	☊ ☰ a.
20	29	22.8	70	62	9	10	1.3	☊° a. p p.
21	28.4	22.6	83	67	10	9	------	☊ p.
22	29.4	23.9	79	63	10	4	------	☿ a.
23	29.5	23.5	79	65	8	5	------	☊ a.
24	30	22.6	77	62	5	6	------	☊ a.
25	27.5	22.6	73	56	8	3	------	☿ a.
26	27.5	17.4	78	59	1	1	------	☊ ☰ a.
27	28.7	19.4	67	55	1	0	------	☊° a.
28	28	20.1	73	64	5	1	------	☊° a. ☍ p.
29	27.7	19.4	79	57	0	2	------	☊ ☰ a.
30	28.8	20.8	68	52	6	0	------	☊ a.
31	31	19.9	72	48	0	2	------	☊ ☰ a.
Mean	29	21.1	77	60.8	3.8	3	------	
Total	------	------	------	------	------	------	3.6	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.
[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	20.9	96	62	0	1	------	☊² ≡ a.
2	28.8	21	90	64	8	8	------	≡° a.
3	32.8	20.8	87	44	2	1	------	≡ a.
4	31	19.8	91	56	0	1	------	≡ a.
5	31.9	21.9	87	60	9	4	------	
6	31.6	22.5	97	58	4	1	------	☊² ≡² a.
7	31.8	19.5	97	43	0	1	------	☊² ≡ a.
8	30.6	19.6	93	64	0	4	------	☊² ≡ a.
9	32.2	18.5	97	48	0	1	------	☊² ≡² a.
10	30.8	19.2	96	65	0	1	------	☊² ≡² a.
11	30.3	19.1	100	64	0	0	------	☊² ≡² a.
12	30.8	20.6	95	68	1	1	------	☊² ≡ a.
13	31.1	20.5	97	61	0	1	------	☊² ≡ a.
14	28.9	18.5	97	57	1	2	------	☊² ≡ d ◠ a.
15	31.5	17.7	93	39	1	1	------	☊ ≡² a.
16	29.7	21	60	52	5	4	------	☊ a.
17	31.4	15.7	91	53	1	1	------	☊° ≡² a.
18	30.6	17	93	48	1	2	------	☊ ≡ a.
19	31.6	17.3	89	40	1	2	------	≡² a.
20	31.8	18.4	79	60	5	9	------	≡° a. ◠ p.
21	29.9	22.1	92	51	8	3	------	
22	30.7	23.3	87	57	9	4	------	
23	32.5	21.9	95	44	8	4	------	≡ a.
24	31.7	20.2	91	50	4	3	------	≡ a.
25	25.3	20.3	76	61	4	4	------	↙° a. p.
26	28.8	15	78	43	2	2	------	≡° a.
27	30.9	14.4	94	35	0	0	------	☊° ≡² a. ☋ p.
28	29.5	15.4	87	48	0	1	------	≡° a.
29	29.8	15.1	94	40	0	0	------	☊ ≡ a.
30	30.9	15.6	91	44	0	1	------	☊ ≡ a.
31	29.7	21.4	65	41	1	1	------	
Mean	30.7	19.2	89.5	52.3	2.4	2.2	------	
Total	------	------	------	------	------	------	------	

SANTO DOMINGO
[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	26.3	21.1	93	76	4	5	0.3	d° a. p.
2	23.3	21	88	81	7	9	4.4	d ● a.
3	23.2	19.3	76	73	10	8	1.8	d² a. d° p.
4	24.9	19.7	84	80	10	8	1.3	d ●° p.
5	27.3	22.7	85	80	5	6	.8	d° a.
6	28.1	24.1	89	78	4	2	15.5	d° ◠ a. ● p.
7	26.2	22	88	77	8	5	4.5	d a. p. ● a.
8	26.9	22.4	86	71	5	2	------	≡ p.
9	27.3	23.1	78	76	1	9	------	
10	27.1	23.3	81	70	2	2	------	
11	27.5	23.4	79	75	3	3	1.3	d p.
12	27.1	23.1	85	71	2	0	------	▾ a.
13	27.8	23.7	79	77	0	4	------	
14	26	20.7	81	84	4	10	1.3	d p.
15	23.3	19.3	65	55	4	7	------	
16	24	19.6	60	60	9	9	.2	d a. p.
17	26.3	21.2	68	68	9	9	25.9	◠ a. d ● p.
18	21.7	18.1	84	81	10	10	5	●° a. d a. p.
19	24	18.6	82	78	10	10	2	● a. d a. p.
20	25.5	19.7	70	68	8	4	------	
21	26.6	23	83	84	10	10	2.2	d° ● p.
22	23.9	21.3	79	73	10	7	1.6	d a. p.
23	24.5	21.3	80	81	4	9	12.4	d a. ● p.
24	22.8	19.6	91	78	10	4	17.3	d a. ◠° ● p.
25	22	19.4	82	81	10	10	2.8	◠ a. d a. p.
26	20.7	17.3	66	56	10	9	------	
27	23.8	17.8	59	58	10	4	2.3	d a. ☊ p.
28	25.3	19.3	90	64	9	4	3.5	● a. p. ☊² p.
29	25.2	16.8	86	70	2	1	3.3	☊ a. ● p.
30	22	20.3	73	75	7	10	7.6	d a. ● a. p. ↙°p.
31	21	16.7	75	71	8	7	7.9	● a. p.
Mean	24.9	20.6	79.5	73.2	6.6	6.4	------	
Total	------	------	------	------	------	------	125.2	

SEISMOLOGICAL BULLETIN FOR JANUARY, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

9, $13^h\ 54^m\ 45^s$.* **Aparri** (NE of Luzon). Oscillatory earthquake. Direction NE–SW, intensity IV, duration 8 seconds. The epicenter lay north-northeast of Manila in the Pacific Ocean, at a distance of 500 kilometers.

10, $22^h\ 38^m$. **Tacloban** (NE of Leyte). Earthquake of intensity II.

11, $11^h\ 43^m\ 5^s$.* **Romblon Island.** Earthquake of intensity III.

11, $22^h\ 35^m$. **Borongan** (E of Samar). Earthquake of intensity III, duration 5 seconds.

12, $11^h\ 16^m$. **Agusan River Valley** (E of Mindanao). Oscillatory earthquake. Direction SSW–NNE, intensity III, duration 10 seconds. This disturbance which appears to have originated in the northwestern part of the valley, was perceptible throughout the northern portion of the latter, from Talacogon to Butuan, a distance of nearly 50 kilometers.

16, $6^h\ 21^m\ 44^s$.* **Eastern Mindanao.** Earthquake of intensity V, having its center in the southwestern part of the Agusan Valley. It was felt distinctly throughout the whole portion of the island which lies east of meridian 124° east of Greenwich, comprising an area of some 28,000 square miles. Its duration exceeded everywhere 50 seconds. In Talacogon and Butuan, the stations nearest to the epicenter, four series or groups of oscillations were observed, which were of great amplitude, but extraordinarily slow. As stated, the epicenter lay in the southwestern part of the Agusan Valley, in about 8° latitude north and 125° 30′ longitude east of Greenwich, in a region only sparsely inhabited by wild people. The stations situated around the center and which reported force V are Talacogon, Butuan and Davao. Of these, Talacogon, though nearest to the epicenter, was still more than 50 kilometers distant. Hence it is very probable that within the epicentral region the disturbance was somewhat more intense. On the other hand, it was not a great earthquake, nor of a very deep-seated origin, since it is doubtful whether the microseismic movements were propagated as far as Europe. They were, however, registered distinctly in Manila, Zikawei, Tsingtau, and the other stations in the Far East. Rather striking is the rapid decrease in the duration of the microseismic movements as registered in Manila, Zikawei, and Tsingtau. For, while at Manila a less sensitive instrument gave their duration as one hour, the more sensitive Wiechert seismographs at Zikawei and Tsingtau indicated durations of only 33 and 40 minutes, respectively. As regards Europe, microseismic movements registered in the observatory at Hamburg at $22^h\ 34^m$ and in that of Stonyhurst at $22^h\ 40^m$ of January 15, may possibly have been due to this earthquake.

At $11^h\ 14^m\ 46^s$ a second earthquake was felt in the same region. In Butuan, Cotabato, and Davao its intensity did not exceed IV, but the report from Talacogon, the nearest station to the epi-

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

center, states that there it was more severe than the earthquake at 6^h 21^m, but of very short duration. The fact that neither the seismographs of Manila nor those of Zikawei, Tsingtau, and Osaka registered this second shock shows that it must have been of far less intensity and of shallow origin, though in the neighborhood of the epicenter the movements may have been more rapid and violent than during the first earthquake.

16, 10^h 7^m. **Cotabato** (SW of Mindanao). Oscillatory earthquake; direction W–E, intensity III. The origin of this earthquake appears to have been different from that of the two preceding disturbances, which had been felt likewise in Cotabato with intensities IV and III, respectively, and the constant direction ENE–WSW. As this earthquake was not felt in Davao, about 150 kilometers to the east, its epicenter lay probably in Illana Bay.

20, 17^h 50^m. **Butuan** (N of Mindanao). Oscillatory earthquake having direction SW–NE and intensity IV. A peculiar feature of this earthquake were rapid vertical oscillations, which were very perceptible even to people who at the time were walking in the streets.

28, 22^h 53^m. **Ormoc** (W of Leyte). Oscillatory earthquake. Direction WSW–ENE, intensity III, duration 5 seconds.

29, 4^h 55^m. **Cotabato** (SW of Mindanao). Oscillatory earthquake. Direction W–E, intensity III.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight = 0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude. (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	h. m. s.	h. m. s.	h. m. s.	mm.	s.	h. m.	
			V.	19 20 50	19 25 12	19 30 10	19 37 38	0.01	12	21 03	
1	1	I_r	H. NNW	19 20 54	19 25 16	19 30 18	19 37 15	.03	7.8	20 52	
			H. WSW	19 20 54	19 25 16	19 30 14	19 37 36	.03	7.2	20 48	
2	1	I_d	V.	22 31 05	----------	22 31 21	22 31 24	.14	2.2	22 35	Vertical component 0.09 mm.
			V.	13 24 22	----------	13 24 38	13 25 14	.75	2.4	13 31	V. C. 0.28 mm.
3	4	I_d	H. NNW	13 24 24	----------	13 24 40	----------	-------	------	13 29	
			H. WSW	13 24 24	----------	13 24 39	----------	-------	------	13 29	
			V.	3 58 20	----------	----------	----------	-------	------	4 22	
4	7	I	H. NNW	3 58 21	----------	----------	4 02 07	.11	9.6	4 19	
			H. WSW	3 58 21	----------	----------	4 02 11	.21	9.9	4 25	
			V.	22 54 02	22 57 40	23 00 43	23 03 55	.01	9.8	23 40	Earthqnake in northeastern part of China.
5	8	II_r	H. NNW	22 54 02	22 57 52	23 00 41	23 03 23	.02	7.8	23 36	
			H. WSW	22 54 02	22 57 28	23 00 34	23 03 37	.05	13.5	23 37	
			V.	13 54 36	----------	13 55 46	13 56 37	.10	2.6	14 10	V. C. 0.01 mm. Earthquake, IV at Aparri (NE of Luzon).
6	9	I_v	H. NNW	13 54 45	----------	13 55 54	13 56 26	.03	5.1	14 07	
			H. WSW	13 54 45	----------	13 56 11	13 56 28	.05	4.8	14 10	
7	9	I_d	..	15 26 18	----------	15 26 33	15 26 51	.02	2.4	15 28	V. C. 0.01 mm.
8	10	I_v	V.	6 39 41	----------	6 40 04	6 40 40	.04	2.4	6 48	
9	11	I_v	V.	11 43 05	----------	11 43 34	11 43 53	.26	2.4	11 50	V. C. 0.01 mm. Earthquake, III at Romblon Island.
10	12	I_d	V.	8 26 03	----------	8 26 18	8 26 21	.14	2.4	8 31	V. C. 0.02 mm.
11	13	I_d	V.	1 43 52	----------	1 44 11	1 44 15	.26	2.4	1 49	V. C. 0.02 mm.
12	13	I	H. WSW	8 29 21	----------	----------	----------	-------	------	8 41	
13	15	I_d	V.	16 33 17	----------	16 33 36	16 33 39	1.08	2	16 40	V. C. 0.55 mm.
			V.	6 21 44	----------	6 23 43	6 23 54	.23	2.4	7 35	V. C. 0.03 mm. Earthquake, V in the eastern part of Mindanao.
14	16	I_v	H. NNW	6 21 45	----------	6 23 43	6 23 49	.67	11.7	7 22	
			H. WSW	6 21 45	----------	6 23 44	6 26 04	.92	12	7 22	
			V.	1 30 00	----------	----------	----------	-------	------	2 03	
15	21	I	H. WSW	1 30 08	----------	----------	----------	-------	------	2 00	
16	21	I_d	V.	8 58 58	----------	8 59 08	8 59 21	.02	2.4	9 03	
			V.	17 09 12	17 21 00	17 33 09	17 48 06	.01	13.8	18 13	Epicenter: $\Phi = 70°.3 \pm 1°.7$ N; $\lambda = 14°.3 \pm 1°.7$ W Greenwich, between Greenland and Jan Mayen Land.
17	22	II_u	H. NNW	17 09 13	17 21 38	17 33 36	17 48 47	.04	14.4	18 21	
			H. WSW	17 09 13	17 21 18	17 33 29	17 52 16	.01	15	18 21	
18	24	I_d	V.	11 28 32	----------	11 28 52	11 28 57	.14	2.4	11 31	V. C. 0.02 mm.
			V.	11 57 07	----------	12 06 24	12 07 29	.02	6.4	12 54	
19	30	I_r	H. NNW	11 57 09	----------	12 07 00	12 07 34	.05	5.7	12 48	
			H. WSW	11 57 09	----------	12 06 36	12 07 24	.14	8.4	12 48	
			V.	0 48 17	----------	----------	----------	-------	------	1 17	
20	31	I	H. NNW	0 48 30	----------	----------	----------	-------	------	1 06	
			H. WSW	0 48 30	----------	----------	----------	-------	------	1 09	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation, NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

9, 13h 54m 45s.* **Aparri** (NE de Luzón). Temblor oscilatorio, dirección NE–SW, intensidad IV, duración 8 segundos. El epicentro se hallaba á 500 kilómetros de distancia de Manila hacia el NNE en el Pacífico.

10, 22h 38m. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad II.

11, 11h 43m 05s.* **Isla de Romblón.** Temblor de tierra de intensidad III.

11, 22h 35m. **Borongan** (E de Sámar). Temblor de tierra de intensidad III, duración 5 segundos.

12, 11h 16m. **Valle del Agusan** (E de Mindanao). Temblor oscilatorio, dirección SSW–NNE, intensidad III, duración 10 segundos. Este temblor fué perceptible en toda la parte N del Valle desde Talacogon á Butúan que distan entre sí cerca de 50 Kms.: el origen parece se hallaba en la parte NW del Valle del Agusan.

16, 6h 21m 44s.* **Parte E de Mindanao.** Temblor de tierra de intensidad V: su epicentro se hallaba en la parte SW del Valle del Río Agusan. Percibióse distintamente en toda la parte oriental de la Isla de Mindanao que cae al E del meridiano 124° E de Greenwich y cuya extensión es de unos 28,000 millas cuadradas. Su duración fué en todas partes de más de 50 segundos: en las estaciones más próximas al epicentro, Talacogon y Butúan, se notaron cuatro series ó grupos de oscilaciones de mucha amplitud pero extraordinariamente lentas. El epicentro se hallaba en la parte SW del Valle del Río Agusan hacia los 8° latitud norte y 125° 30′ longitud E de Greenwich, en una región habitada sólo por pocos salvajes: las estaciones situadas al rededor del epicentro, donde el temblor tuvo intensidad V, son Talacogon, Butúan y Dávao, de las cuales la más próxima, Talacogon, dista aun más de 50 Kms.: es por consiguiente probable que en el epicentro tuvo alguna mayor intensidad. No fué sin embargo un grande terremoto y de profundo origen, puesto que es dudoso que los movimientos microséismicos se propagasen hasta Europa; registráronlos bien los seismógrafos de Manila, Zikawei, Tsingtau y los demás del Extremo Oriente, pero es notable la rápida disminución que se observa en la duración de la perturbación microséismica registrada en Manila, Zikawei y Tsingtau; pues mientras en Manila con aparatos menos sensibles fué de una hora, en las dos estaciones citadas, con seismógrafos Wiechert solo duró 33 y 40 minutos respectivamente. En Europa parece que se registró en el observatorio de Hamburgo á 22h 34m y en el de Stonyhurst á 22h 40m del día 15.

Á 11h 14m 46s se experimentó en la misma región un segundo terremoto ó repetición, cuya intensidad no pasó de IV en Butúan, Cotabato, y Dávao, pero en el report de Talacogon (la estación más cercana al epicentro) se dice que tuvo allí mayor intensidad que el terremoto de 6h 21m aunque duró muy poco. Ni los seismógrafos de Manila, ni los de Zikawei, Tsingtau y Osaka registraron este segundo temblor, lo cual indica que debió ser de mucha menos intensidad y de origen más superficial, aunque tal vez de movimiento más rápido y violento en las cercanías del epicentro.

16, 10h 07m. **Cotabato** (SW de Mindanao). Temblor oscilatorio, dirección W–E, intensidad III. El origen de este temblor parece ser distinto del de los dos precedentes, sentidos también en esta estación con intensidades IV y III y dirección constante ENE–WSW. Como no se sintió en Dávao situado unos 150 kilómetros al E, es muy probable que el epicentro estaba en la Bahía Illana.

20, 17h 50m. **Butúan** (N de Mindanao). Temblor oscilatorio, dirección SW–NE, intensidad IV. Notáronse vibraciones verticales rápidas y muy perceptibles aun para los que andaban por la calle.

28, 22h 53m. **Ormoc** (W de Leyte). Temblor oscilatorio, dirección WSW–ENE, intensidad III, duración 5 segundos.

29, 4h 55m. **Cotabato** (SW de Mindanao). Temblor oscilatorio, dirección W–E, intensidad III.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

[1] **La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.**

BULLETIN FOR FEBRUARY, 1910.

METEOROLOGICAL BULLETIN FOR FEBRUARY, 1910.

By REV. JOSÉ CORONAS, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The monthly mean atmospheric pressure is moderately lower than both the normal for this month and the monthly mean for February, 1909. The highest pressures were recorded in almost all the stations of the Philippines on the 2d or 3d, and the lowest, with a few exceptions, on the 9th.

The monthly mean temperature differs very little from that of the preceding year. The extreme values for Manila were 33.2° C. and 19.5° C. They were registered on the 27th and 28th, respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR FEBRUARY, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from February, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from February, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	757.90	−1.42?	759.71	3	756.13	9	26.2	0	31.9	9	20.1	24
Surigao	58.71	— .99	60.58	20	57.30	9	25.3	— .1	30.5	7,19	21.2	24
Cebu	58.64	−1.16	60.52	3	57.12	9	25.8	— .1	30.2	23,24	21	22
Iloilo	58.83	— .88	60.98	2	57.11	9	26.2	+ .1	32.5	8	20.8	24
Ormoc	58.86	−1	60.63	3	57.41	9	25.2	+ .4	31.9	6	18.4	22
Tacloban	59.28	−1.08	61.26	3	57.82	9	25.7	— .1	31.5	17,22	22.3	4,28
Calbayog	59.57	−1.14	61.76	2	57.86	9	25.1	----------	32.9	26	18.8	22
Legaspi	59.72	— .99	62.57	2	57.83	9	25.9	0	31.3	27	20.9	23
Atimonan	60.04	— .87	64.12	2	58.21	17	25.4	— .6	31.4	28	20.6	24
Manila	59.74	— .92	63.44	2	57.89	9	25.6	+ .3	33.2	27	19.5	28
San Isidro	59.75	— .91	63.78	2	57.86	9	25.7	+ .5	34	17	17.8	26
Dagupan	59.52	— .94	63.17	2	57.67	9	26.5	+ .3	35.9	27	18.7	26
Bolinao	59.44	−1.02	62.93	2	57.69	9	26.2	— .2	32.7	25	18.5	2
Baguio[2]	636.94	----------	639.27	2	635.79	12	17.2	----------	26.5	27	11.5	2
Vigan	759.71	— .98	763.35	2	757.83	9	26.3	0	33	20	20.7	9
Tuguegarao	60.98	— .58	67.31	2	58.32	28	24.5	— .5	34.6	28	16.6	26
Aparri	61.56	— .53	67.98	2	58.62	28	23.7	----------	33	25	18.6	27

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Precipitation.—The number of stations reporting a total amount of rainfall greater than that of February, 1909, is almost identical to the number of those that have reported a less amount. The monthly total for Manila differs from the normal by only +0.6 millimeter.

RAINFALL AT VARIOUS STATIONS OF THE WHEATHER BUREAU DURING THE MONTH OF FEBRUARY, 1910.

Station.	Total.	Departure from February 1909.	Rainy days.	Departure from February 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from February 1909.	Rainy days.	Departure from February 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	66.1	—100.2	12	−2	31	26	Sumay, Guam	60.5	— 0.9	14	—5	16	12
Isabela Basilan	56.6	— 86.1	9	—3	19.6	2	Calapan	90.5	— 1.2	16	+1	18.8	14
Zamboanga	106.9	+ 99.7	8	—3	33.8	18	Virac	265.5	+ 59.6	17	—2	101.6	12
Davao	352.6	-------	16	------	43.7	13	Nueva Caceres	134	-------	11	------	30.8	11
Cotabato	128.3	— 66	11	—2	45.7	2	Batangas	1.1	— 4.8	2	0	.8	11
Cagayan, Misamis	46.1	+ 5.2	9	—1	8.1	3	Atimonan	130.1	— 17.6	13	+2	51.5	11
Dapitan	79.8	-------	14	------	29	10	Silang	19.1	— 13.2	4	—1	7.9	10
Butuan	353.6	+149.6	21	0	50.2	14	San Antonio, Laguna	86.6	—104.1	10	—2	20.5	4
Yap W. Carolines	128	— 81.2	16	+3	22.6	15	Manila	11.1	— 3	5	+1	6.9	11
Tagbilaran	160.8	+110.1	14	−2	34.2	2	San Isidro	.8	— 5.8	2	—1	.5	19
Surigao	592.6	+220.8	22	+1	78.6	13	Tarlac	1	— 12	1	—3	1	10
Maasin	360.4	— 71.2	10	0	92	2	Baler	130.6	-------	15	------	40.4	14
Cebu	196.3	+ 95.2	15	+4	75.8	2	Dagupan	14.8	— 93.2	3	—1	10.7	19
Iloilo	45.7	+ 22.7	7	—4	18.7	2	Bolinao	9.2	+ 5.4	1	0	9.2	11
San Jose Buenavista	21.2	+ 6.2	9	+4	4.8	14, 26	Baguio	7.9	— 44.1	3	—4	4.6	11
Ormoc	116.1	+ 66.3	18	+5	24.9	3	San Fernando, Unión	30.5	+ 8.6	1	—2	30.5	11
Tacloban	254.8	+ 89.4	21	+6	52.3	1	Echague	53.5	— 8.4	16	+3	32.8	14
Borongan	487.9	+ 66.7	25	+5	89.1	1	Candon	3.8	— 6.1	1	—2	3.8	11
Calbayog	340.1	+243.8	19	+5	71	1	Vigan	.3	— 4.2	1	—1	.3	12
Masbate	264.3	—205.7	17	+7	100.3	1	Tuguegarao	36.5	— .9	6	+1	14.7	13
Romblon	123.7	+ 28.6	17	—1	29.5	13	Laoag	0	— 6.6	0	—2	0	0
Laoang	479.6	+175.3	23	+1	187.9	1	Aparri	19.8	— 25.5	9	—4	5	4
Gubat	202	—241	14	—3	84.3	1	Sto. Domingo, Batanes Is.	144.2	+ 51.5	22	+8	29	4
Legaspi	370.9	— 91.8	20	+2	106.6	12							

DEPRESSIONS AND TYPHOONS.

No depression or typhoon has visited the Philippines during the whole month of February. Yet we wish to mention here a well-developed cyclone which having appeared as a depression in the Eastern Sea, at 6 a. m. of the 8th, and having moved very rapidly along the southern and eastern coast of Japan, was situated in our weather map, at 6 a. m. of the 10th, east of the northernmost part of Japan, with a lowest barometer of 738 millimeters at the station of Nemuro.

Thanks to the kindness of Captain Allen we are in possession of the barographic record obtained on board the steamer *Ningchow* near the center of this storm in the north Pacific. The barometric reading was as low as 701.03 millimeters (27.60 inches) from 4 p. m. to 8 p. m. of the 10th. The position of the steamer at noon of the same day was 43° 30′ latitude N and 152° 22′ longitude E. A gale started from east backing through NE to N, and then a whole hurricane from NW blew steady for twenty-four hours.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La media mensual de la presión atmosférica es algo inferior así á la normal de este mes como á la media mensual de Febrero 1909. Las mayores presiones se registraron en casi todas las estaciones de Filipinas el día 2 ó 3, y las menores, con muy raras excepciones, el día 9.

La temperatura media mensual difiere muy poco de la del año anterior. Los valores extremos para Manila fueron 33.2°C., y 19.5°C., registrados los días 27 y 28, respectivamente.

Precipitación acuosa.—El número de estaciones que dan un total de lluvia mayor que el de Febrero, 1909 es casi idéntico al de aquellos que dan un total menor. La cantidad de agua recogida en Manila durante el mes difiere de la normal en sólo +0.6 mm.

DEPRESIONES Y TIFONES.

Ninguna depresión ó tifón ha visitado las Islas Filipinas durante el mes de Febrero. Sin embargo, queremos mencionar aquí un ciclón bien desarrollado que habiendo aparecido en forma de depresión en el Mar del Este, á 6 a. m. del 8, y habiéndose movido muy rápidamente á lo largo de la costa meridional y oriental de Japón, se hallaba situado en nuestro mapa del tiempo de 6 a. m. del 10 al E de la parte más septentrional de Japón con una mínima barométrica de 738 mm. en la estación de Nemuro.

Gracias á la amabilidad del Capitán Allen tenemos en nuestro poder la curva barográfica obtenida á bordo del vapor *Ningchow* cerca del centro de este ciclón en el Pacífico. El barómetro estuvo á 701.03 milímetros (27.60 pulgadas) desde las 4 p. m. hasta las 8 p. m. del día 10. La posición del vapor á mediodía del 10 era 43° 30′ latitud N 152° 22′ longitud E. Empezaron á soplar vientos violentos del E que rolaron al NE y N, y fijándose luego al NW soplaron con fuerza huracanada por espacio de veinticuatro horas.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	762.45	24.9	30.7	21.3	25.1	27.2	26.2	26.5	27	27.3	66.2	15.2	7.5	5.4
2	63.44	24.7	30.2	21	25.3	27.3	26.3	26.6	26.9	27.3	65.2	14.8	8	5.4
3	63.24	24	29.7	20.4	25.5	26.9	26.3	26.5	26.9	27.2	69	15.2	4.6	3.4
4	61.59	24.6	30.1	19.8	25.2	26.9	26.3	26.5	26.9	27.3	72.4	16.5	5.7	4.2
5	60.12	25.9	31.6	21.8	25.8	27.1	26.3	26.5	27	27.3	73.1	18	4.6	3.5
6	59.29	25.8	30.5	22.7	25.8	27.7	26.4	26.7	26.9	27.2	78.5	19.3	2.6	2.3
7	59.09	25.3	31.3	21.8	26	26.9	26.5	26.7	27	27.2	80.2	19	3.5	2.7
8	58.32	26.2	31.4	21	25.7	27.3	26.4	26.8	27	27.2	77.9	19.5	4.3	3.1
9	57.89	26.6	31.4	22.8	26.8	28.2	26.9	27.2	27	27.2	79	20.3	3.9	2.9
10	58.54	26.5	31.3	23.5	26.9	28.3	27.1	27.3	27	27.2	76.5	19.5	4.2	3.4
11	59.06	24.3	26.9	22.8	26.9	27.5	27.2	27.3	27	27.2	87.5	19.8	1.4	1.3
12	59.03	24.7	29.3	21.7	26.3	27.6	27.1	27.3	27	27.2	78.2	17.9	2.9	2.4
13	59.42	24.1	29.4	20	25.8	26.7	26.9	26.9	27	27.3	83.3	18.6	1.9	1.8
14	59.49	26.1	32.8	21.3	25.9	28.6	26.8	27.2	27	27.2	78	19.2	5.2	3.6
15	59.27	26.7	32.3	22.8	26.9	28	27.2	27.5	27.1	27.2	74.7	19.2	5	3.2
16	58.97	26.6	32.7	22.3	27	28.8	27.3	27.7	27.1	27.2	76.2	19.4	4.8	3.5
17	58.24	26.9	32.3	21.5	27	29.2	27.4	27.8	27.1	27.2	77.1	20	4.9	3.6
18	58.45	26.9	31.9	23	27.8	28.9	27.8	28	27.2	27.3	78.6	20.6	4.4	3.6
19	59.91	25.5	28.8	22.9	27.3	28.1	27.7	27.7	27.2	27.3	81.7	19.8	2.2	1.9
20	60.68	25.6	32.4	21	26.4	28.8	27.3	28	27	27.1	77.2	18.6	5.1	3.9
21	60.60	25.5	31.4	21.6	27	27.8	27.5	27.6	27.2	27.3	73.6	17.6	4.4	3.5
22	60	25.6	32.3	19.9	26	28.9	27.2	27.8	27	27.2	70.7	16.9	6.6	5
23	59.85	25.8	31.7	20.5	26.6	28.9	27.3	27.8	27.2	27.3	70.8	17.2	5.9	4.2
24	60.02	24.6	29.8	19.7	26.8	28	27.5	27.7	27.2	27.2	71	16.1	5.3	4.1
25	59.40	25.5	33.1	19.9	26	28.3	27.3	27.8	27.2	27.3	61.9	14.4	7.5	5.3
26	59.42	25.7	32.9	19.7	25.8	28	27.2	27.6	27.2	27.2	68.3	16.6	6.8	4.3
27	58.60	26.2	33.2	21.4	26.7	29.3	27.4	27.9	27.3	27.3	71.2	17.6	7	4.5
28	58.35	25.3	32	19.5	26.5	28.2	27.5	27.8	27.2	27.3	73.4	17.3	5.5	4.1
Mean	759.74	25.6	31.2	21.3	26.3	28	27	27.3	27.1	27.2	74.7	18	4.8	3.6
Total													135.7	100.1
Departure from normal	—1.56	+0.3	+0.5	+1.0							—0.8	+0.4		

Date.	Wind.				Clouds.			Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction. Upper.	Lower.			
		Km.	*Km.*		*0-10.*			*h.* *m.*	*mm.*	
1	N, NE	328.5	34.5	NE	6.8	Ci.-S.	Cu. E	8 45	-------	≡° a.
2	NNE	341.5	33	ENE	5	Ci.	Cu. ENE	8 00	-------	≡c a.
3	NNE	297	23	NE	9.4	Ci.-S.	N.-cf. E	1 50	-------	
4	NNE	343	27	N	7	A.-Cu.	Cu. E	5 00	-------	≡° a.
5	NNE, NE	217.5	24	NNE	6.9	A.-Cu.	Cu. E	5 45	0.3	≡° d a. ●° p.
6	W quad.	88.5	8.5	W	8.8	Ci.-S.	S.-Cu. EbyS	4 50	2.3	≡° a. p p.
7	NW quad.	118.5	14	SE	6.4	A.-Cu.	Cu. E	5 40	-------	≡ a. d° p.
8	W quad.	143	14	N	6.2	Ci.	Cu. E	6 40	-------	≡° a.
9	W quad.	126	14	N	7.4	Ci.	N.-cf. E	6 10	-------	≡° a.
10	SE quad.	174	17.5	ESE	8.7	Ci.-S.	Cu. E	0 45	-------	d a.
11	SE quad.	72	9.5	ENE	10	----------	Fr.-N. NE	0 00	6.9	● a. ●° p.
12	W quad.	75.5	10.5	WbyN	8.8	Ci.-S.	Cu.-N. E	3 05	.3	≡° a. p p.
13	NE quad.	89.5	12	E	8.1	Ci.-S.	Cu. E	2 35	1.3	Ω ≡° d° a. ●° p.
14	SE	145.5	16	SE	5.3	A.-Cu. ESE	Cu. ESE	7 00	-------	≡° a.
15	SE	172.5	21	SE	5.1	A.-Cu.	Cu. ESE	9 00	-------	≡° a.
16	SE quad.	155	16	WNW	4	----------	Cu. ESE	9 40	-------	≡ a.
17	W quad.	128.5	17	W	1.8	Ci.	Cu. E	10 20	-------	≡° a.
18	ESE	216.5	19	ESE	5.2	Ci.	Cu. E	5 45	-------	≡° a.
19	NE quad.	103.5	17	NE	9.4	A.-Cu.	S.-Cu. E	0 05	-------	≡° d° a. ⌒² p.
20	Variable	148.5	19	NbyE	6.2	Ci.	Cu. E	8 15	-------	Ω ≡° a.
21	SE quad.	161.5	13	WNW	5.7	A.-Cu. SE	Cu. E	5 15	-------	≡° a.
22	SE	179.5	22	SE	3.7	Ci.	Cu. EbyN	9 10	-------	≡° a.
23	NE, SE	159	14.5	SE	3.8	Ci.-S.	Cu. NE	9 40	-------	≡° a.
24	SE	218	22	ESE	7.1	Ci.-S.	Cu. E	1 35	-------	≡° a.
25	E	325	30	EbyS	2.9	Ci.	Cu. E	10 25	-------	
26	SE quad.	236	18.5	WNW	2.4	Ci.	Cu. E	10 15	-------	
27	SE, ESE	227.5	24	SE	3.6	Ci.-S.	Cu. EbyN	8 20	-------	≡° a.
28	E quad.	210.5	19.5	ESE	8.1	Ci.	Cu. E	5 00	-------	≡° a.
Mean		185.8	18.9		6.2			6 02	-------	
Total								168 50	11.1	
Departure from normal		—6.7			+1.5			—33 53	+0.6	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.85	26.2	29.6	22.2	81	NNE	1.7	9.5	Ci.-S.	Cu.-N. NNE	1.3	● a. d p.
2	59.34	25.3	27.9	23	86.3	N quad.	1.2	10	----------	Cu.-N. NNE	34.2	● a. d p.
3	59.71	24.6	25.7	22.8	89.2	NW	.7	10	----------	Cu.-N. NE	21.6	● a. p.
4	58.54	25.7	30.2	22.8	82.9	N quad.	1.2	7.7	----------	Cu.-N. E, NE	.5	d° a.
5	57.76	26.3	29.3	23.1	83.7	NW, NNE	1.7	8.8	Ci.-S.	Cu.-N. E	11	d a. ● p.
6	57.58	26.7	31.3	23.3	79.3	N quad.	1.5	7.3	Ci.-S.	Cu.-N. ENE, E	------	
7	57.55	26.9	30.7	23.1	79	NNE, SE	1.2	8.2	Ci.-S.	Cu.-N. E	------	
8	56.74	27	31.1	22.6	81.9	NNE	1.3	8.2	Ci.-S. SE	Cu.-N. ESE	------	
9	56.13	26.8	31.9	21.1	81.7	NNE, SE	1.5	6	Ci.-S.	Cu. ENE, NNE	------	
10	56.60	26.3	30.8	23	82.7	NNE	1.7	8.5	Ci.-S.	Cu.-N. ENE	18.5	●² p.
11	56.83	26.8	30.1	23.6	81.6	Variable	1.5	8.5	Ci.-S.	Cu.-N. E	------	
12	56.81	26.4	31.4	22.4	79.5	NNE, SE	1	7.5	Ci.-S.	Cu.-N. E	2	●° p.
13	58.20	25.2	28.5	23	82.8	NE quad.	2	8.5	Ci.-S.	Cu.-N. E	.3	d p.
14	58.12	26.3	29.5	22.9	81.5	N quad.	1.8	8.8	Ci.-S.	Cu.-N. E	4.6	● a.
15	58.37	24.9	27	22.6	87.2	Variable	1.3	9.5	A.-Cu.	N. E	1.3	● a.
16	57.47	26.1	29.2	22.8	85.5	N quad.	1.3	8.5	Ci.-S.	N. E	24.6	d a. ● p.
17	56.78	26.7	31.3	23.4	84.3	NE	1.5	8.2	Ci.-S.	Cu.-N. E	3.5	d p.
18	56.98	26.4	30.5	22.5	81.7	NNE	1.2	7.8	Ci.-S.	Cu.-N. E	3	d p.
19	57.96	26.8	30.7	22.9	80.5	N quad.	1.7	8.5	Ci.-S.	Cu.-N. E	1	
20	59.55	26	28.5	23.7	80	NE quad.	1.7	8.3	Ci.-S.	Cu.-N. E	.5	d a.
21	59.14	26.4	30	22.9	81.9	NE, SE	1.8	7.8	Ci.-S.	Cu.-N. E	------	
22	58.55	26	30.7	21.4	79.2	SE	1.5	7.7	Ci.-S., A.-Cu.	Cu.-N. E	------	
23	58.19	26.3	31.5	22.6	81	NNE, SE	1.2	8.3	Ci.-S. S	Cu.-N. E, NNE	------	◡ p.
24	58.20	25.7	31.2	20.1	75.7	N quad.	1.5	8.8	Ci.-S.	Cu.-N. NNE	------	
25	58.02	26.2	29	22.4	78.9	NW, NNE	1.2	9.5	Ci.-S.	Cu.-N. E	------	d° p.
26	57.76	26.3	31.1	23.1	82.3	N quad.	1.2	9.8	Ci.-S.	Cu.-N. E	3.5	d ◡ p.
27	57.94	26	31.5	23.7	83.8	NNE, SE	.8	9.8	Ci.-S.	Cu.-N., N. E	29.4	● p.
28	57.51	26	30.9	22.5	83	NNE, WNW	1.3	9.3	Ci.-S.	Cu.-N. E	------	
Mean	757.90	26.2	30	22.7	82.1	----------	1.4	8.5	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	160.8	

The barometric readings of this station seem to be too low.

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.28	25	28.5	23.1	88.5	NE	0.5	9.7	A.-Cu.	Fr.-N. NE	16.3	●° a. p.
2	59.75	25.8	29	23.5	87	NE	.9	9.5	Ci.-S. N	Fr.-N. NE	64.7	● a. p.
3	60.56	23.8	27	21.9	92.8	NE	1.2	10	----------	Fr.-N. NE	75.4	●² a. p.
4	59.32	25.6	30.3	22.4	88	ENE	.6	8.3	Ci.-S. N	S.-Cu. NE	20.6	● Ω p.
5	58.34	25.8	30.1	23.5	91.2	NE quad.	.5	8.3	A.-Cu.	N.-Cf. E	8.9	● a. p.
6	58.39	25.6	29.2	23.2	89	E	.5	8	Ci. N	N.-Cf. E	3.8	● a. Ω p.
7	58.11	26.2	30.5	23.3	86.7	E	.5	5	Ci. N	Cu. E	------	d° Ω° a. ∞ Ω p.
8	57.56	26.4	30	23.8	86.2	ENE	.3	6.5	Ci.-S. N	Cu. E	------	Ω a. p. ∞ p.
9	57.30	26	30	21.7	85.7	E by N	.6	6.7	Ci.-S. N	Cu.	14.5	Ω ≡° a. ∞ p.
10	57.76	24.8	27.7	22.5	93.2	E quad.	.4	9.8	----------	Fr.-N. NE	29.5	● a. p.
11	58.10	26.2	30.2	23.4	87	NE	.7	6.3	Ci. N	Cu. NE	------	Ω° d a. ∞ Ω° p.
12	57.83	25.8	29.9	22.5	87.8	E quad.	.2	6.5	Ci.-S. N	Cu. NE	18.5	Ω² a. ● p.
13	59.09	23.4	24.9	22.2	95.5	S	.3	10	----------	N.	78.6	●² a. p.
14	59.01	24.6	26.9	22.8	93.8	ENE	.6	9.8	----------	Fr.-N. NE	51.3	●² a. p.
15	59.12	24.4	28.6	21.7	90.5	E quad.	.5	10	Ci.-S.	Fr.-N. ENE	6.9	● a. p.
16	58.56	25.2	28.5	23.7	92.3	E quad.	.2	9.3	Ci.-S.	Fr.-N. ENE	6.9	●° a. p.
17	57.68	25.1	29.2	22.8	92.5	NE	.2	8.3	Ci. N	S.-Cu., Cu. NE	26.2	● a. p.
18	57.97	26	29.2	23.6	91.2	Variable	.6	6.5	Ci. N	Fr.-N., Cu. NE	8.9	● a. p. Ω° p.
19	58.91	25.8	30.5	23.2	89.3	EbyN, NW	.2	6	Ci.-S. N	N.-Cf. E	64.7	Ω² a. ∞ ●° ◡ p.
20	60.58	23.7	25.4	22.4	93.8	NW	.6	8.7	A.-Cu.	N.	40.7	●² a. p. Ω° p.
21	59.76	26.1	30	23.1	87.8	E quad.	.6	6.8	Variable	Cu. E	1	●° a. ∞ Ω° p.
22	59.31	25.2	29.5	22.3	88.2	E quad.	.2	6.8	A.-Cu. N	Cu. NE	3.3	Ω²≡◑ a. ∞ Ω° p.
23	59.22	25.4	29.6	22	84.2	Variable	.5	7.3	A.-Cu. N	Cu. NE	------	≡° Ω² a. ∞ Ω° p.
24	58.84	25.1	29	21.2	85.7	NNE	.5	7.7	A.-Cu. N	Cu. NE	4.1	Ω² a. ∞ ● p.
25	58.77	25.6	28.7	23.7	85.8	NE, E	.8	9.7	Ci.-S., A.-Cu.	Cu. NE	9.7	p a. ● ∞ p.
26	58.50	26	30	22.7	86	ENE	.5	8.3	Ci., Ci.-S. NE	Cu. E	14.5	∞ p.
27	58.14	24.6	28.1	23.1	93.7	NNE	.3	9.8	A.-Cu., Ci.-S.	Fr.-N. NE	23.6	Ω² a. ● a. p.
28	58.10	25.6	29.4	22.5	85.9	E by N	.5	7.5	Ci.-S. N	Cu. NE	------	Ω² ≡ a. ∞ Ω° p.
Mean	758.71	25.3	28.9	22.8	89.3	----------	.5	8.1	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	592.6	

[1] All the mean values given in these tables are deduced from six daily observations.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.56	25.1	28.8	23.3	76.7	NE	9.6	8.8	A-Cu., Ci.-S.	Cu.-N. ENE	8.3	≡° ☊ ☋ a. ● a. p.
2	60.34	23.5	26	21.8	84.8	NE	10	9.2	Ci.-S.	N. ENE	75.8	≡ ☊ a. ●² a. p.
3	60.52	23.5	25	22.5	87.2	NE	8.8	9.3	----------	N. ENE	65.6	≡° ☊ a. ●² a. p.
4	59.20	26	28.8	22	72	NE	10.6	5	Ci.	Cu.-N., Cu. ENE	------	≡° d a.
5	58.35	25.9	30	22.9	74.9	NE	7.9	4.2	Ci.	S.-Cu. ENE	2.8	≡° ☊ a.
6	58.07	26.4	29.5	23.5	73.1	NE quad.	8.7	5.5	Ci., Ci.-S.	Cu. ENE	------	≡° ● a.
7	58.08	26.4	29.5	23.5	70.8	NE, E	8.8	5.2	Variable	S.-Cu. ENE	------	≡° ☊ a.
8	57.45	26.7	29.1	23.5	71.2	E	7.2	4.8	Ci., Ci.-S.	Cu. ENE	------	☊ ≡° a.
9	57.12	26.9	30	23.4	69.8	E	7.5	3.5	Ci.	Cu. ENE	------	☊ ≡° a.
10	57.71	26.7	29.6	23.7	73.6	NE	10.9	5.5	A.-Cu. E	Cu. ENE	10.4	☊ ≡° a. ● p.
11	57.97	26.5	29.9	23.5	73.7	E, N	9.9	3.7	Ci.	Cu. ENE	------	☊ a.
12	57.75	26	29.5	23.3	70.9	N	9.6	5	Ci.-S.	Cu. ENE	------	☊ a.
13	58.83	25.1	28.1	22.5	73.8	NE quad.	7	7.7	Ci.-S.	Cu.-N. E	1	☊ a. ●° p.
14	58.97	25.3	28.5	23.2	77.5	NE	5.6	7.2	Ci.-S.	Cu.-N. ENE	1.3	☊ a. ● p.
15	59.12	24.9	27.2	22.6	79	E, NE	5.1	7.7	Ci.-S.	Cu.-N. ENE	7.4	☊ ● a.
16	58.31	26.5	28.5	24.1	73.2	NE quad.	6.3	6.8	Ci.-S.	Cu. E	7.4	☊ ● a.
17	57.59	27.2	29.7	23.7	72	NE quad.	9.2	3.7	Ci.	Cu. ENE	------	☊ ● a.
18	57.86	27	30	23.9	71.8	NE	10.7	3.7	Ci.	Cu. ENE	------	☊ a.
19	58.80	26.4	29.5	23.9	73.6	NE	8.6	4.7	Ci.	Cu. ENE	6.9	☊ a
20	60.11	24.4	26.5	23.1	79.3	NE quad.	8.2	7.5	A.-Cu.	N. ENE	2.1	☊ a. ● a. p.
21	59.68	25.9	29.5	22.6	73.2	NE quad.	10.1	4.7	Ci.	Cu. ENE	6.7	☊ d a. ● p.
22	59.32	25.2	28.9	21	71	NE	9.4	2.5	Ci.	Cu. ENE	------	☊ a.
23	59.02	26.3	30.2	22.3	66.5	NE	12	4.5	Ci.	Cu. ENE	------	☊ a.
24	58.83	26.2	30.2	22	65.5	NE quad.	10.4	4.8	Ci.	Cu., S.-Cu. ENE	.3	☊ a. d p.
25	58.76	25.6	28	23.3	70.4	NE	8.2	7.7	Ci.-S.	N.-cf. ENE	------	☊ a. ∞ p.
26	58.54	26	29	23.5	72.8	NE quad.	8.2	6	Ci.-S.	N.-cf. ENE	.3	☊ a. ●° ⌐ p.
27	58.05	26.2	30	23.5	71.8	NE	9.2	7.8	Ci.-S.	S.-Cu. ENE	------	☊ a.
28	57.87	25.7	28.9	22.9	73.6	E	6.8	6.7	Ci.-S.	Cu. ENE	------	☊² ☋ a. ∞ p.
Mean	758.64	25.8	28.9	23	73.7	----------	8.7	5.8	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	196.3	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	760.14	24.6	28.5	22.4	86.7	N	17.7	8.2	A.-Cu.	Cu.	3.8	●° a. p.
2	60.98	23.3	25	22.4	94.2	NE	18.7	10	Ci.-S.	Cu.-N.	18.7	● a. p.
3	60.94	24.2	26.4	22.5	87.8	NE	18.3	9.8	Ci.-S.	Cu.	11.7	● a. p.
4	59.61	25.8	30.5	22.9	81.5	NE	17.1	6	A.-Cu.	Cu. NE	------	
5	58.76	26.2	31.1	22.9	81.2	NE quad.	15.1	5.7	A.-Cu. ENE	Cu. NE	------	☊° a. d° a. p.
6	58.18	26.7	30.9	23.5	77.2	NE quad.	14.4	4.2	Ci.-S.	Cu. NE	------	
7	58.33	26.8	30.9	23.7	78.8	NNE	14.2	5.3	Ci.-S., A.-Cu.	Cu. NE	------	
8	57.64	27.3	32.5	23.4	78.6	NNE	11.3	5.2	Ci.-S., A.-Cu. E	Cu. NE	------	
9	57.11	27.6	32	24	76	NE quad.	11.6	3.7	Ci.	Cu.	------	☊ a.
10	57.76	26.8	31.9	23	78.8	NE quad.	14.5	5.8	Ci.-S.	Cu. NE	6.9	☊ a. ≤ ● p.
11	58.09	26.5	30.6	23.4	80.2	NE	11.2	5.2	Ci.-S.	Cu.	------	≤ p.
12	57.91	26.4	30.6	22.9	77.4	NE quad.	12.3	5.3	Ci.	Cu.	------	
13	58.69	26.8	32.4	23.3	77.8	NE	10.2	6.3	A.-Cu. E	Cu.	------	
14	59	26.7	31.4	24	80.9	NE	12.2	7.5	A.-Cu. ENE	Cu.	1.3	● p.
15	59.05	26.2	30.9	23.4	80.8	NE	12	7.2	A.-Cu., Ci.-S.	Cu.	------	
16	58.37	27	31.4	24.2	79.5	NE quad.	13.2	6.7	A.-Cu. ENE	Cu. NE	------	
17	57.78	27.2	31.9	23.8	78.5	NE quad.	12.2	3	Ci.	Cu.	------	☊² a.
18	57.92	27.3	31.5	24	77.3	NE	15.5	6.2	A.-Cu. ENE	Cu.	.8	≤ p.
19	59.05	26.9	31.6	23.7	80	NE	12.7	8.8	Ci.-S.	Cu. ENE	2	●° a. p.
20	59.94	25.8	28.8	23.2	82.3	NE	16.6	8.3	Ci.-S.	Cu. ENE	------	
21	59.86	26.5	31	23.7	76.3	NE	16.6	5.3	A.-Cu.	Cu. NE, ENE	------	☊ ≡° d a. ∞ p.
22	59.68	25.6	30.2	21.8	73.5	NE	15.7	2.3	Ci.	Cu. NE	------	☊ ≡° a. ∞ p.
23	59.40	25.6	31	21.4	72.7	NE quad.	14.9	5.7	Ci.	Cu. N	------	☊ ≡° a. ∪ p.
24	59.18	26	31.7	20.8	68.2	NE, N	16.2	5.5	Ci., A.-Cu.	Cu. NE	------	☊ ≡° a. ∞ p.
25	58.73	25.9	31	22.5	74	N, NE	16	7.5	Ci.-S.	Cu. NE	------	d ≡° a.
26	58.94	25.8	30	23.4	80.8	N, NE	11.4	8	A.-Cu.	Cu.	------	☊ ≡° d a.
27	58.42	26.6	31.3	23.4	78.7	NE	13.2	8.5	Ci.-S., A.-Cu. ENE	Cu.	.5	☊ ≡° a. d ● p.
28	57.81	26.2	30.5	22.9	75.3	NE	12.9	8.3	Ci.-S.	Cu.	------	≡° a.
Mean	758.83	26.2	30.6	23.1	79.1	----------	14.2	6.4	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	45.7	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.84	25.2	28.6	22.5	82.8	NE quad.	5.6	9.3	Ci.-S.	Cu.-N. ENE	11.7	≡° a. ●° a. p.
2	60.57	24	27.1	22.4	89.8	N quad.	6.3	9.2	Ci.-S.	Cu.-N. ENE	18.3	≡° ●° a. p.
3	60.63	24.5	26.3	22.3	88.5	N quad.	5.9	9.7	----------	Cu.-N. E	24.9	≡° a. ● a. p.
4	59.50	26.4	29.9	22.9	75	NE	7	6.5	A.-Cu. E	Cu.-N. E	------	≡° a.
5	58.66	24.9	29.8	22.6	87.8	N quad.	4.7	7.3	Ci.-S.	Cu.-N. E	9.6	≡° a. p. ● p.
6	58.30	26.3	31.9	21.8	77	NW, SE	5.8	5.7	Ci. S by W	Cu. E	------	d ≡° a. ∞ p.
7	58.49	25.4	30.9	21.6	85.3	NE quad.	4.5	7	Ci.-S.	Cu.-N. E	1.3	≡° a. p p.
8	57.77	25.6	29.4	22.8	88.1	N quad.	4.2	7.3	Ci.-S.	Cu.-N.	------	≡° a. p° p.
9	57.41	25.2	30.5	21	83.2	SE quad.	5.7	7.8	Ci.-S.	Cu.-N. E	------	♌ a. ≡° a. p.
10	57.93	25.2	29.9	20.9	88.2	Variable	4.9	7.8	A.-Cu. E	Cu.-N. E	7.1	≡° a. ●° p.
11	57.94	25.9	28.1	21.1	77	NE	5.2	5.3	Ci. S	Cu. NE	------	d° ≡° a. ∞ p.
12	58.09	23.4	28.4	19.9	90.4	SE	3.7	7.3	Ci.-S.	Cu.-N. E	17.2	♌ ≡° a. ● p.
13	58.93	24.4	27.8	20.9	88	Variable	5.1	8.7	Ci.-S.	Cu.-N. E	2.1	≡° a. d° p.
14	59.14	25.2	28.2	22.4	87	N, NE	4.4	9.5	Ci.-S.	Cu.-N. E	4.3	d° ≡° ⌐ a.
15	59.24	25.4	29	22.7	88.8	N quad.	4.5	9.5	Ci.-S.	Cu.-N. E	------	●° a. d p.
16	58.42	25.5	30.2	22.1	83.6	Variable	4.4	7.5	Ci.-S.	Cu.-N. E	------	♌ ≡° a.
17	57.87	26	31.5	21.8	83	W	4.5	6.3	Ci.-S., A.-Cu.	Cu.-N. E	------	≡° a.
18	58.14	25.8	31.5	22.8	84.5	Variable	5.2	7.2	Ci.-S.	Cu.-N. ENE	1	≡° a. ◠ d° p.
19	59.10	24.8	28.4	21.5	88.8	NW quad.	4.1	8.8	Ci.-S.	Cu.-N. E, ENE	3.3	≡° d° a. ●° p.
20	60.34	25.2	27.1	23	84.5	N, S	5.4	8.7	Ci.-S.	Cu.-N. SE	.3	♌ ≡° d° a.
21	59.82	26.2	30.7	21	77.2	NE quad.	6.3	7.2	A.-Cu. E	Cu.-N. NE	.3	≡° d° a.
22	59.52	24.5	31.3	18.4	79.5	N, SSW	5.1	4.8	A.-Cu. SE	Cu. ENE	------	♌² ≡ a. p p.
23	59.31	24.6	31.5	19.1	74	Variable	5	5.7	Ci.-S.	Cu. NE	------	♌ ≡° a.
24	59.16	24.7	30.5	19.9	78.1	N quad.	5.7	7.8	A.-Cu. SE	Cu.-N. ENE	------	≡° a. ◠ p p.
25	58.90	25.7	29.3	21.3	75.5	NE quad.	5.8	9.2	Ci.-S.	Cu.-N. E	3	≡° a.
26	58.79	25.4	30.4	22.9	85.3	SW	4.3	9	Ci.	Cu.-N. E	.3	●° a.
27	58.32	25.2	29.5	21.9	86.2	N	4.2	9.3	Ci. E	Cu.-N. NE	11.4	d° ≡ ● ⌐ p ☥°
28	58.06	25.9	31.2	20.8	75	N quad.	5	8.5	Ci. SE	Variable	------	♌ ≡° a.
Mean	758.86	25.2	29.4	21.6	83.3	----------	5.1	7.8	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	116.1	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	760.46	24.4	26.5	23	90.5	NE quad.	0.8	9.2	----------	N. E	52.3	●² a. p. ◠ a.
2	61.07	24.4	27	22.9	92.2	N	.8	9.5	----------	N. ENE	42.1	●² a. p.
3	61.26	24.4	27	22.9	91	NE quad.	1	10	----------	N. ENE	27.2	● a. p.
4	60.09	24.8	28.3	22.3	88	Variable	.2	7.2	Ci.-S. SSW	Cu.-N. E	9.4	● a. p.
5	59.19	25	29.7	23	90.9	Variable	.8	8.8	Ci.-S.	Cu.-N., N. ENE	13.2	● a. p.
6	58.79	25.9	30.4	23	83.2	E	.8	6.8	Ci. SW	Cu. E	7.4	● p.
7	58.80	25.6	29.6	23	86.3	NW, NE	.5	8.2	Ci.-S. SW	N. Cu.-N. E, ENE	6.1	● p.
8	58.11	25.8	29.5	24	89	NW	.5	6	Ci.-S.	Variable ENE	7.9	● a.
9	57.82	25.4	29.6	23.7	87.7	SSE	.5	6.7	Ci.-S. SW	N. E	18.8	● p.
10	58.30	26	29.7	23.5	86	ENE	.3	9.2	Ci.-S. SW	Cu.-N. ESE	2.6	● a. p.
11	58.50	26.4	31	22.6	80.2	Variable	.5	4.2	Ci. SW	Cu. E	------	♌² ○° a.
12	58.46	24.6	27	23	90.7	NW	.2	7.3	Ci.-S.	N. E	18.3	♌° a. ● a. p.
13	59.21	25.4	30.6	23.1	84.3	Variable	.8	8.2	Ci.-S. SW	Cu.-N. E	5.1	
14	59.40	25.8	28.2	23.5	86.8	Variable	.3	9.2	----------	Cu.-N. ESE	4.4	
15	59.51	26.4	30.8	23.8	83.3	ESE	.5	8.7	A.-Cu. E	Cu. E	.8	● p.
16	58.92	26.3	30	23.6	87.3	Variable	.5	7	Ci.-S. WNW	Cu.-N. E	3.3	●° a. p.
17	58.16	27	31.5	23.7	81.7	Variable	.7	5.7	Ci.-S. WSW	Cu. E, ENE	2.5	
18	58.38	26.8	30.9	24	83.2	Variable	.5	7.5	Ci.-S. SW	Cu.-N. ENE	------	● ◠ a.
19	59.44	25.3	29	23.6	88.8	NNW, NNE	.7	8.2	Ci.-S. SW	Cu.-N. ENE	7.7	● a. p. ⊤ p.
20	60.76	25.2	29.4	23.5	87.8	NW quad.	.8	8.3	Ci.-S.	Cu.-N., N. NE	23.4	●² a. p. ☥² ⊤ p.
21	60.32	26	30	23.5	83.7	NE	.7	6.2	Ci.-S.	Cu. ENE	------	●° a.
22	59.88	25.9	31.5	22.7	78.3	NW quad.	.8	5.7	Ci.-S.	Cu. NE	------	♌² d a.
23	59.73	25.9	30.5	22.5	75	N quad.	1.2	6.5	Ci. W	Fr.-Cu., Cu. NE	------	♌² a. ☋ p.
24	59.49	25.4	30.4	22.5	82.3	WNW	1.2	7.3	Ci. W	Cu. ENE	.5	d p.
25	59.51	25.8	29.5	23.2	84.3	SE quad.	.8	8.2	Ci.-S. W	Cu.-N. NE, ENE	.5	d p.
26	59.01	26.9	31.3	24.1	80.4	Variable	.8	8.2	Ci.-S. W	Cu.-N., Cu. ENE	------	
27	58.68	26.2	29.8	23.9	81.8	NE quad.	.8	8.7	Ci.-S.	Cu.-N. NE	1.3	☋² ●° a.
28	58.55	25.9	30.5	22.3	80.3	Variable	.7	7.7	Ci. WSW	Cu. ENE	------	○ a. p.
Mean	759.28	25.7	29.6	23.2	85.2	----------	.7	7.7	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	254.8	

METEOROLOGICAL DATA, ETC.—Continued.

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	760.98	24.4	28.9	22.1	91.7	NE quad.	1.7	9.5	A.-Cu.	N. NE	71	● a. p.
2	61.76	23.3	25.2	22.5	95	NE	1.5	9.7	A.-Cu.	N. NE	40.6	● a. p.
3	61.67	23.8	27.5	21.9	92.3	NE quad.	1.7	9.5	A.-Cu.	N. ENE	21.1	● a. p.
4	60.34	25.3	29.9	22.2	88.5	NE quad.	1.5	8.5	A.-Cu.	S.-Cu. E	3	●° p.
5	59.41	24.5	30.9	22.3	93.2	N	.8	8.2	A.-Cu.	S.-Cu. ENE	34.9	● p.
6	58.72	26.1	32.2	22.7	84.8	N	1.2	4.8	Ci.	S.-Cu. E	------	
7	58.98	25.6	30.7	22.5	88.7	Variable	1	6.2	Ci.-S.	S.-Cu. E	2.6	d p.
8	58.21	25.7	30.2	22.9	91.3	N, NE	.8	6.8	Ci.-S., A.-Cu.	S.-Cu. E	40.1	●² p.
9	57.86	25.1	28.8	22.7	92	N	1	6.2	Ci.-S.	S.-Cu. E	15.2	● a. p.
10	58.58	25	29.4	22.2	92.2	N	.8	6.2	A.-Cu.	S.-Cu. E	25.9	● p.
11	58.72	25.2	30.7	21.6	87.8	N	1	4.7	Ci.-S.	S.-Cu. E	11.7	♌ a. ● p.
12	58.61	24	27.9	21.4	91.8	N	.8	7.8	Ci.-S., A.-Cu.	S.-Cu. ENE	26.8	● p.
13	59.44	25.2	31.5	22.4	87.2	N, NE	1.2	8.2	A.-Cu. SE	S.-Cu. ESE	9.1	d² a. ● p.
14	59.67	25.4	30.9	22.4	87.5	NE	1.2	7.5	Ci.-S., A.-Cu.	S.-Cu. ESE	8.6	≡° a. ● p.
15	59.82	26.2	30.5	23.3	83.7	NE	1.2	7.3	A.-Cu. SE	S.-Cu. E	------	≡° d° a.
16	59.07	26	29.6	22.7	86.3	SE quad.	.8	7.3	Ci.-S. SE	S.-Cu. E	6.3	d° a. ● ◠° ⌣ p.
17	58.46	26.1	30.9	23.5	90.3	N	1	6.7	Ci.-S.	S.-Cu., Cu.-N. E	15.3	● a. p. ⊽ ≲ p.
18	58.87	25.3	30.4	21.8	88.1	NE	.7	6.3	A.-Cu. E	S.-Cu. NE	.8	♌² d ⊽ ≲
19	59.83	25.4	30.3	23.4	87.8	NE quad.	1.2	8.2	A.-Cu. E	S.-Cu. ENE	1	d² ⊽ p.
20	60.94	25.1	30.5	21.7	89	N, NE	1.5	5.5	Ci.-S. SE	Cu. E	2.8	♌ ≡° d² ┼ ⊽
21	60.74	25.7	32.2	21	81	NE quad.	1.7	2.3	Ci.	Cu. ENE	------	≡° a. ⊽ p.
22	60.34	24.6	32.6	18.8	81.7	NE	1.3	3.2	Ci.-S.	Cu , S.-Cu. E	------	♌² ≡° a. ⊽ p.
23	60.06	24.8	32.2	19.3	77.8	N, NE	1.3	5	Ci.-S. SE	Cu. NE	------	⊽ ♌ ≡° a. ⌣ p.
24	59.97	24.3	29.7	20.5	83.6	NE	1.5	7.8	Ci.-S.	S.-Cu. E	------	d ⊽ p.
25	59.67	25.4	30.4	22.1	82	NE quad.	1.3	7.3	A.-Cu. E, SE	S.-Cu. E, ESE	------	≡° a.
26	59.35	26.3	32.9	22.2	82.4	NE quad.	1.3	7.2	Ci.-S. SE	S.-Cu. E	------	a. ◠° p.
27	59.04	25.4	30.8	22.4	87.8	N	.7	6.8	Ci.-S.	S.-Cu. E	3.3	a. ●° p.
28	58.76	24.9	30.1	21.2	86.3	N	1.3	7.3	Ci.-S. SE	S.-Cu. E	------	≡° a.
Mean	759.57	25.1	30.3	22	87.6	----------	1.2	6.9	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	340.1	

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	761.73	23.5	24.4	22.5	93.2	NE	21.3	9.8	Ci.-S.	N, Fr.-N. NE	37.2	● a. p.
2	62.57	24	25.1	22.5	86.2	NE	26.2	10	Ci.-S.	Fr.-N. NNE	9.2	● a. p.
3	62.49	23.7	25	22.6	89.8	NE	19.7	9.8	Ci.-S.	Fr.-N. NE	15.7	● a. p.
4	60.76	25.3	29.1	22.5	84.2	NE	16.2	6.2	Ci.-S., Ci.	Fr.-N. NE	.8	d a.
5	59.60	25.2	28.3	22.9	87.3	NE	10.5	8.2	Ci.-S.	Fr.-N. NE	44.9	● a. p.
6	59.20	25.6	29.5	23.7	87.2	NE	10	5	Ci.	Cu.-N. NE	8.1	● a. p.
7	59.18	26.4	30.1	24.2	83.8	NE	10.8	5.8	Ci.	Cu.-N., Cu. ENE	26.5	● a. p. ◠ p.
8	58.31	26.6	30	23.4	85.5	ENE	6.3	6.8	Ci. W	Cu. ENE	10.7	● a.
9	57.83	26.7	30.2	24	83.7	NE	9.3	5.7	Ci.	Cu.-N. E	9.5	● a. p.
10	58.50	27	30	24.5	81.2	E quad.	9.8	5.2	Ci.	Cu. ENE	7.6	● a. p.
11	58.60	26.8	30	23.5	79.2	E	9.6	3.8	Ci. SSW	Cu.-N. E, ENE	7.9	● a.
12	58.84	24	27.1	22.3	93.2	NE	8.4	9.7	Ci.-S.	N.	106.6	● a. p.
13	59.68	24.1	27.2	22.1	89.5	E, NE	10.8	10	Ci.-S.	Fr.-N. ENE, ESE	17.9	● a. d p.
14	59.82	25.8	28.5	23	83.7	E	13	9.2	Ci.-S.	Fr.-N., Cu.-N. ENE	2.8	● a. d p.
15	59.78	26.7	29.7	25	80.5	ENE	13.2	4.8	Ci.-S. W	Cu. E	5	●° p.
16	59.14	26.8	30	24	82.3	E	12.8	4.5	Ci. SW	Cu.-N. E	4.6	●° a. p.
17	58.43	27	30.5	23.6	81.6	E	9	2.2	Ci.	Cu. E	------	● ≡° a.
18	58.86	27	30.6	24	77.1	ENE	12.6	1	Ci.	Cu. NE	------	≡° a.
19	59.89	24.6	27	22.6	85.3	NE	12.4	7.5	Ci.-S.	Cu.-N., Fr.-N. ENE	39.7	● a. p.
20	61.02	26.2	29.2	23	80.8	E	14.8	5.8	Ci.	Cu.-N. NE	2.3	● a. d° p.
21	60.94	26.2	29.7	23.5	72.8	NE, ENE	14.1	2.7	Ci.	Cu. NE	------	≡° a.
22	60.29	26.2	30.9	22.7	69.2	NE	10.3	1.8	Ci.	Cu. ENE	------	≡ a.
23	60.07	25.4	31.1	20.9	72.3	ENE, NE	8.8	1.7	Ci.	Cu. NE	------	≡ a.
24	59.92	26.4	31.2	23.4	70.7	NE	11.1	4.7	Ci. S	Cu. NE	------	≡◠ a.
25	59.70	27.1	30.6	24.5	73	NE, E	15.8	5.2	Ci.-S.	Cu., Cu.-N. ENE	------	≡° a.
26	59.61	26.2	29.1	23.5	82.7	E quad.	8.7	9	Ci.-S.	Cu.-N. ENE	13.9	● a. d p.
27	58.94	27.1	31.3	24	76.3	E, NE	11	1.8	Ci.	Cu.	------	≡° a.
28	58.57	27.1	30.6	23.9	76.5	ENE	10.5	6.8	Ci. SW	Cu. NE	------	◠ a.
Mean	759.72	25.9	29.1	23.3	81.7	----------	12.4	5.9	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	370.9	

METEOROLOGICAL DATA, ETC.—Continued.

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	762.94	24.4	25.3	22.4	79.8	NNE, NE	32.2	10	Ci.-S.	S.-Cu. NE	2.4	d a. p.
2	64.12	24.7	25.5	23	73.5	NNE, NE	28.7	9.8	Ci.-Cu.	S.-Cu. NE	1.8	d a. p.
3	63.66	24	24.9	22	82	NNE, NE	28.4	10	Ci.-S.	N., S.-Cu. NE	7.9	d a. p.
4	62.02	24.3	25.2	22.3	88.2	N	26.7	10	Ci.-Cu., Ci.-S.	N., S.-Cu. NE	5.1	d a. p.
5	60.54	24.6	26.2	23	89.8	N	25	9.5	Ci.-Cu., A.-Cu.	N., S.-Cu. NE	30.5	d a. ● p.
6	59.68	24.8	26.4	23	91.2	N quad.	20.8	9.8	A.-Cu. ENE	S.-Cu. NE	6.2	d a. p.
7	59.41	25.4	27.9	23.5	89	N	16.7	9.3	A.-Cu. E	S.-Cu. NE	.5	d a. p.
8	58.63	25.6	27.6	24.5	90.7	NNW, N	15.1	8.8	Ci.	S.-Cu. NE, N	------	d° a.
9	58.39	25.3	26.4	24.2	91.4	N	----	9.8	Ci.	S.-Cu. NE	16.2	d ● a. p.
10	58.93	24.6	26.7	22.5	92.2	NW	16.7	8.3	Ci.	S.-Cu. N	1	● a. d² p.
11	59.18	24	25.5	22.2	93.2	N quad.	20.3	10	Ci.	N. N	51.5	d ● a. p.
12	59.68	23.3	25.2	21.8	91.7	NE	23.7	9.7	Ci. ENE	N. NE, N	4.4	● a. d p.
13	59.69	24.6	28.4	22.4	88.9	NE quad.	11.1	9	A.-Cu. E	S.-Cu. E	------	d p.
14	59.68	25.4	27.7	22.9	87.8	N	9	7.8	A.-Cu. SE	S.-Cu., Cu. SE	------	
15	59.61	25.7	29	22.5	86.2	SW, NNW	8.3	7.7	A.-Cu. E, ESE	S.-Cu. E, ESE	1.8	☊² ☰ a. ●° p.
16	59.21	25.3	28.2	21.5	88.5	N, SW	13.4	6.2	Ci.	S.-Cu. N	------	☊² ☰ a. ☋ p.
17	58.21	26.3	29.2	24.1	87.2	SW, NW	10.5	4.5	Ci.	S.-Cu. N	------	☋ p.
18	58.68	27	30.1	25.2	81.1	N	16.8	4.5	Ci.	S.-Cu. NE	------	
19	59.77	27	30.5	24.9	82	NE, N	13.9	6.2	Ci. SE	Cu. E, NE	------	[☄ ☋° p.
20	60.84	26.8	30	24.8	81.8	NNE, NE	----	6.2	Ci. E	S.-Cu. NE	.8	[☄ d² ☋° p.
21	60.99	26.3	30.4	24.4	78.2	NE quad.	18.6	4.7	A.-Cu. ENE	Cu. NE	------	☋² p.
22	60.34	26.4	30.6	23.8	72.6	NE quad.	11.8	2.7	Ci.	Cu. NE, E	------	☊° a. ☋² a. p.
23	60.02	24.8	28.2	20.8	84.7	SW, NW	14.6	3.8	Ci. SE	Cu. NE, N	------	☊° a. ☋² a. p.
24	60.12	25.4	29.8	20.6	78.7	NE	14.7	5.5	Ci. SE	Cu. NE	------	☋° p.
25	59.68	26.8	31.2	24.7	76.3	NE	18.4	4.5	Ci.	Cu. E	------	☋ a. p.
26	59.67	26	29.7	22.1	84.2	N quad.	17	8	Ci.	S.-Cu. NE	------	d ☋² p.
27	58.97	26.4	29.6	23.3	81	N	11.7	4.8	Ci. SE	Cu. NE	------	☊ ☰° a. ☋° p.
28	58.49	26.7	31.4	22.3	81.2	NNE	12.3	7.3	Ci.	Cu. E	-----	☋° ☊ a. ☍ p.
Mean	760.04	25.4	28.1	23	84.8	----------	17.6	7.4	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	130.1	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	762.80	23.8	29.6	20.4	65.5	NE quad.	1.6	4.8	Ci. SE	Cu. ENE	------	☾² a.
2	63.78	24	29.1	20.5	62.3	NE	1.5	4.5	Ci.	Cu. ENE	------	☊° ☰° a.
3	63.52	23.8	29.1	20	64.8	NE quad.	1.3	5.7	A.-Cu. E	N. NE	------	☊° a.
4	61.77	24.8	29.9	20.9	67.2	E quad	1.1	6.2	Ci.-S. S, SE	Cu. E, NE	------	☊° a.
5	60.32	25.4	30.3	22	70.2	NW, NE	1.1	6.7	A.-Cu.	N. ENE	------	d° p.
6	59.34	25.8	30.7	22	69	NW, ESE	1	7	Ci.-S. S	Cu. E	------	
7	59.07	25.9	30.6	21.2	71	NW, ESE	1.8	5	A.-Cu. SE	S.-Cu. NE	------	☊° a.
8	58.27	26.9	33.1	20.9	70.8	NW quad.	.8	4.8	Ci.	Cu.-N. ENE	------	☊° a.
9	57.86	26.4	31.8	22.4	73.4	NW, E	1.3	5.3	Ci.	S.-Cu. ENE	------	☊° ☰° a.
10	58.50	26.9	31.2	22.8	69.6	NE quad.	1.2	6.8	Ci. SE	Cu. E quad.	------	d° p.
11	58.96	25.2	29.7	23	74.3	E quad.	1.5	9.3	Ci.-S.	N. ESE	------	
12	59.01	25.3	30	22	68.3	Variable	1.1	7	A.-Cu. SE	Cu. NE	------	
13	59.30	25	30.8	20.4	76.5	NW	.8	9.2	Ci.-S.	N. E	------	d° p.
14	59.45	25.8	30.9	22	75.5	E quad.	1.3	7.5	A.-Cu. SE	N. E quad.	0.3	d² a.
15	59.17	26.4	31	23.1	72.7	ENE	1.2	6.5	A.-Cu. SE	Cu., N. ESE quad	------	
16	58.87	27.1	32.8	22.5	69	E quad.	.8	4.5	A.-Cu. SE	Cu. E	------	
17	58.07	27.7	34	22.4	70	NW	.8	5.2	Ci.	Cu. E, NE	------	
18	58.28	27.1	32.9	22.6	73.5	NW, E	1.3	4.5	A.-Cu.	Cu. E, NE	------	☊² ☰ a.
19	59.94	25.2	31	22.5	78.2	NW	.7	6.2	A.-Cu. ESE	Cu., N. ENE	.5	☊° a. d² ◠° p.
20	60.73	25.6	30.7	21	73.3	VW, ESE	1.1	6.5	A.-Cu. SE	Cu. E	------	☊° a.
21	60.74	24.9	29.3	21.2	71.6	NNW, E	1.8	4.5	A.-Cu., Ci.	S.-Cu. E	------	☊° a. p.
22	59.93	25.2	31	19.9	69.4	NNW, E	1.9	4.8	A.-Cu. E	Cu. E, N	------	☊° a. ☋° p.
23	59.76	26.6	32.1	21.2	62.3	NE	1.3	4.7	Ci.	Cu. ENE	------	☊° p.
24	59.92	25.4	31	20	67	NNW, ESE	1.4	5.5	Ci.-S. SSE	Cu. E	------	☊ a.
25	59.39	25	30.8	19	65.1	E	2.2	3.7	Ci. SE	Cu. ESE	------	☊² a. p.
26	59.39	25.2	33	17.8	65.6	NE quad.	.9	3.5	Ci. SE	Cu. ESE	------	☊² a.
27	58.57	26.6	33.4	21	64.7	NNW, NE	1	4.2	Ci. SE	Cu. E	------	☊° a.
28	58.33	26	32.2	19.9	66.2	E	1.2	6.2	Ci. SE	Cu. E	------	☊² ☰° a. ◯° ⊥° p
Mean	759.75	25.7	31.1	21.2	69.5	----------	1.2	5.7	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	.8	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	762.40	25	31	20.4	71.2	S, SE	13.1	3.8	Ci.	S.-Cu.	------	ↄ° ☂ a.
2	63.17	24.9	31.2	20.2	63.2	SE	19.2	2.2	Ci.-S., Ci.	S.-Cu.	------	
3	62.92	24.8	30.9	19.5	72.5	S, SE	14	3.5	Ci.-S.	S.-Cu.	------	☂ a.
4	61.64	25.5	31.7	20.6	77.7	SSE, NW	12.4	3.2	Ci.-S., Ci.	S.-Cu.	------	
5	60.12	25.1	33.6	21	83.3	Variable	8.4	5.2	A.-Cu.	S.-Cu. SE	------	
6	59	25.9	34.1	21	79.4	S	8.5	7.2	A.-Cu.	S.-Cu. E	------	
7	58.79	27.1	34.3	22.1	77.2	S	9.2	3.8		S.-Cu. ESE	------	
8	58.54	26	30.6	21.8	85.3	SE, NW	14.2	4.8	Ci.	S.-Cu.	------	
9	57.67	27	34.1	21.9	84	NNW, NW	10.3	5	Ci.	S.-Cu. SE	------	
10	58.43	27	32.2	22.3	82.3	SE, NNW	10.5	5.7	A.-Cu., Ci-S.	S.-Cu.	------	
11	58.50	26.4	33.3	23.2	83	SSE, NW	7.7	7.3	A.-Cu.	S.-Cu. SE	3.8	d p.
12	58.64	26.5	32.7	22.7	76.2	SE quad.	8.8	9.2	A.-Cu.	S.-Cu. SE	------	
13	59.20	25.8	31.4	21.5	83.2	SE	9.9	7.3	A.-Cu.	S.-Cu. S	------	
14	59.30	27.3	34.6	22.2	80.3	S, SSE	10.7	7.3		S.-Cu. SE	------	d a.
15	59.02	27.1	33.5	22.7	82.2	SE	8.1	6.7	Ci.	S.-Cu. SE	.3	d ≺ p.
16	58.84	27.3	32.9	22.5	80.2	SE, NW	10.7	3.3		S.-Cu. SE	------	
17	58.16	27.3	32.7	23.6	85.3	NW	14.4	3.3	Ci.	S.-Cu. SE	------	
18	58.37	26.5	30.6	22.6	84.8	NW	10.9	3.2	Ci.	S.-Cu. SSE	------	
19	59.48	27.2	35.6	23.5	82.5	S	10.5	5	Ci.	S.-Cu. S	10.7	p ⌈ ◪ p.
20	60.42	26.9	33.9	21.9	79.8	SE	8.4	5.2	Ci.	S.-Cu. SSE	------	
21	60.17	27.2	33.9	22.8	72.8	SE	15.5	5.2	Ci.	S.-Cu. SE	------	⏢ p.
22	59.66	27.1	34.9	22.4	75	SE	12.7	4.5	Ci.	S.-Cu.	------	
23	59.82	26	30.6	21.8	79.8	NW	12.7	5.7	Ci.-S.	S.-Cu.	------	☂ p.
24	59.56	27.2	34.5	21.5	71.5	SE quad.	9.4	5.7	Ci.	S.-Cu. ESE	------	
25	58.80	27.4	34.8	22	61.5	SE	15.6	2	Ci.	Cu., S.-Cu.	------	☂ a.
26	59.44	25.5	32.4	18.7	76	SE, NW	10.4	2.2	Ci.	S.-Cu.	------	☂° a.
27	58.40	27	35.9	20.8	77.9	SE, SSE	10.5	1.7	Ci.	S.-Cu.	------	
28	58.12	27.1	35.4	22.6	77.1	NE, SSE	8.2	7.5	Ci.-S.	S.-Cu.	------	
Mean	759.52	26.5	33.1	21.8	78	------	11.2	4.9	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	14.8	

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 8.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	762.26	24.6	28.1	20.1	77.2	SSE, NNE	2.3	9.2	Ci.-S.	Cu.-N.	------	♌ ≡ a.
2	62.93	24.1	28.9	18.5	76.5	SE quad.	2.5	9.3	Ci.-S.	S.-Cu.	------	♌² ≡² a.
3	62.84	24.1	28.3	20.3	77.2	SSE, NNE	2.3	8.3	Ci.-S.	Cu.	------	↿° ♌ ≡° a.
4	61.67	24.8	27.8	20.4	76.2	SSE, NNE	2.3	3.8	Ci -S.	Cu.	------	♌ ≡° a.
5	59.92	25.8	28.3	23.2	80.3	NNE	2.7	8.3	Ci.-S.	Cu.-N.	------	≡° d a.
6	58.89	25.6	28.3	21.8	82.3	SE quad.	2	9.2	Ci.-S.	S.-Cu.	------	♌ ≡° a.
7	58.63	27	31.9	23	78	SE quad.	2.3	5.8	Ci.-S., Ci.	S.-Cu.	------	♌ ≡° a.
8	58.60	25.8	29.2	21.8	81.3	SSE, NNE	3	9.7	Ci.-S.	Cu.-N. NNE	------	♌ ≡° a.
9	57.69	26.6	29.2	24.5	81.1	NNE	2.8	8	Ci.-S., Ci.	Cu.	------	♌ ≡° a.
10	58.30	26.3	29.3	23.1	82.8	SSE, NNE	2.7	8	Ci.-S.	Cu. NNE	------	♌ ≡° a.
11	58.50	25.7	28.7	22.9	82.8	NNE	1.8	9.5	Ci.-S.	S.-Cu.	9.2	♌ ≡ a. ◯° ● p.
12	58.52	25.5	29.8	22.9	81.7	SSE, NNE	2.7	10	A.-Cu.	Cu.-N.	------	
13	59.11	25.9	28.5	23	80	SSE, NNE	1.8	10	A.-Cu.	Cu.-N.	------	♌ ≡ a.
14	59.22	26.4	29.5	23.6	82.3	S, SSE	2.3	10	Ci.-S., A.-Cu.	S.-Cu., Cu.-N.	------	♌° ≡ a. ●° p.
15	58.97	27.3	31.3	24	81.5	SSE, SE	2	7.7	Ci.-S.	S.-Cu.	------	♌° ≡ a. d p.
16	58.85	27.2	31	23.9	80.3	NNE	2.5	5.5	Ci.-S.	Cu.	------	♌ ≡ a.
17	58.28	26.9	29.2	24.9	81.7	NE quad.	3.5	7.3	Ci.	Cu. NE	------	≡° a.
18	58.39	26.8	29.4	25.4	81.3	NNE	3.7	7.8	Ci.-S.	Cu. NE, NNE	------	≡° a.
19	59.34	26.8	30.4	23	83.3	Variable	2	8	Ci.-S.	Cu.	------	♌ ≡ a. ⌈ ◪ p.
20	60.28	27.1	31.3	23.4	79.6	SSE, ESE	2.7	10	Ci.-S.	Cu.	------	♌° ≡ a.
21	60.11	27.5	31.6	23.4	78	SE, W	3	8.7	Ci.-S.	Cu.	------	♌° ≡ a. ⊤ d p.
22	59.55	26.7	30.9	23.9	76.7	SE	3	6.5	Ci.-S.	Cu.	------	♌° ≡° a.
23	59.83	26.3	29.6	23.3	80.8	NNE	3.2	10	Ci.-S.	Cu. NNE	------	≡° a.
24	59.44	27.6	31	25.1	79.8	NNE, E	3	10	Ci.-S.	Cu.-N.	------	≡° a.
25	58.65	27.1	32.7	22.2	75	SSE, SE	3.3	6.2	Ci.-S.	Cu.	------	♌² ≡² a.
26	59.36	26.2	29.6	21.6	76.7	SSE, NNE	2.8	5.7	Ci.-S.	Cu.	------	♌ ≡² a.
27	58.24	26.4	30.4	22.8	79.8	Variable	2.3	4	Ci.-S.	Cu.	------	♌° ≡ a.
28	58.06	26.5	31	22.6	78.3	SE, NNE	2.2	8	Ci.-S.	Cu.	------	♌ ≡ a.
Mean	759.44	26.2	29.8	22.8	79.7	------	2.6	8	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	9.2	

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).[1]	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	638.74	15.1	22.1	12.2	87	ESE	22.1	6.3	Ci., A.-Cu.	Cu.	------	
2	39.27	14.4	20.2	11.5	90.2	ESE	26	5.6	Ci.-S. SW	Cu.	------	
3	39.17	15.3	22.8	11.9	92.2	E	24.9	5.4	Ci.-S. WSW	Cu.	------	☊ a.
4	38.45	16.7	24.1	12.9	78.5	SE, E	22.6	6.3	Ci. SW	S.-Cf. EbyS	------	☰° p.
5	37.49	16.8	22.1	14.4	81.3	E	14.5	8.6	A.-Cu. E, SE	S.-Cu. NE	------	☌ a p.
6	36.65	17.8	24	14.4	81.5	E, ESE	18	9.1	A.-Cu. SE	S.-Cu. SE, ENE	------	⊕ p.
7	36.64	17.8	24.1	15.4	91	SE quad.	12.8	6.1	Ci.	N.-Cf. ENE	------	☰° ☊^{c} a. ☰ p.
8	36.30	18.2	23.6	14.7	90.2	E, NE	10.5	9.6	Ci.-S., Ci.	S.-Cf. ESE	------	☰^{2} ☊^{2} a. ☰ d^{2} p.
9	35.83	18.2	24.9	15.5	90.5	Variable	13.1	7	Ci.	N.-Cf.	------	☊^{2} a. ☰ p.
10	36.26	17.6	23	15.2	94.5	E, W	9.3	8	A.-Cu. SE	Cu. NbyE	1.8	☊^{2} a. ●° ☰ p.
11	36.20	16.7	21.2	14.5	94.8	E, W	11.2	9.9	Ci.	S. E	4.6	● ☰^{2} p.
12	35.79	16.2	20.6	13.5	88.7	SE quad.	14.2	9.7	A.-S.	S.-Cu. SE	------	⊕ a. ☰° p.
13	36.30	16.6	22.7	14.3	94.2	E	14.7	9.4	A.-Cu. W, SW	Cu.	------	☰ d° p.
14	36.74	17.1	21.6	15	94.2	E	11.9	9.6	----------	S.-Cu. E, SE	1.5	● v a. ☰^{2} ● p
15	36.67	17.7	23.1	15.1	93.8	E	12	7.6	Ci.	S.-Cu. SE	------	☊^{2} ☰ a. ☰^{2} ☂ p.
16	36.72	18.2	23.6	15.1	94	Variable	9.6	7.1	Ci.	Cu.	------	☊ a. ☰ ●° p.
17	36.24	18.4	25.1	15.2	87	Variable	11	4	Ci.	Cu. NE	------	☊^{2} ☰ a.
18	36.24	18.8	24.4	15.6	89.2	SE	12.2	5.9	Ci.	S.-Cf. NW	------	☊^{2} a. ☰ a p.
19	37.07	17.7	24.7	15	92.8	SE, W	13.3	7.9	Ci.	N. W	------	☊ a. ☰ p.
20	37.91	18.3	24.7	14.3	86.3	NE, E	12.3	8.6	Ci., Ci.-S.	Fr.-Cu. NE	------	☊☰°◯°☩°d°⌒°
21	37.47	16.8	23.1	14.2	91.7	E quad.	15.3	7.7	Ci.	Cu. E,ESE	------	☊ a. ☰° a. p.
22	36.97	17.1	23.5	14.5	93.8	Variable	11.8	8.9	A.-Cu. NWbyW	N.-Cf. NE	------	☊ ☰^{2} a. ☰ p.
23	36.92	17.1	22.7	14.1	91.2	NW, W	15.6	8.3	Ci.-S. SSW	Fr.-Cu. N	------	☊^{2} ◯ a. ☰^{2} p.
24	36.82	17.1	22.4	13.5	92.7	E quad.	12.8	7.6	Ci. SW	Cu. E	------	☊^{2} ☰° a.
25	36.33	17.7	24.6	14	79	ESE	20.9	3	Ci.	Fr.-Cu. E	------	☊ a.
26	36.72	17.5	23.9	12.4	74.7	Variable	11.6	2.4	Ci.	Cu.	------	☊ a.
27	36.33	18.7	26.5	14.8	81.5	E quad.	9.9	3.7	Ci.	Cu.	------	☊ a. ☰^{2} p.
28	35.99	17.4	23.6	14	93.2	Variable	10.3	7.1	Ci.	Cu.	------	☊^{2} a. ☰ a. p.
Mean	636.94	17.2	23.3	14.2	88.9	----------	14.4	7.2	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	7.9	

[1] Not reduced to sea level.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	762.92	26.4	32.5	23.6	44.8	NE quad.	2	1.3	Ci.-S.	Cu.	------	☋ a.
2	63.35	26.1	30.6	23.1	47.1	NE quad.	3	1.8	Ci.-S.	Cu., S.-Cu.	------	☋ a.
3	62.99	26.9	32.3	23.4	47	NE	1.7	.7	Ci.	S.-Cu., Cu.	------	☋ a.
4	61.90	25.7	31.3	21.3	63.3	ENE, NNW	1	0	Ci.	S.-Cu.	------	☰ a.
5	60.42	25.6	32.4	21	70.9	N quad.	1.2	5.8	A.-Cu.	S.-Cu.	------	☰° a.
6	58.94	26.2	31.8	21.9	75.3	N	1.2	2	Ci.-S., A.-Cu.	S.-Cu.	------	☰° a.
7	58.95	26.7	31.7	22.9	82.5	Variable	.7	.8	Ci.-S.	S.-Cu.	------	☰ a.
8	59	26	30.5	22	84.3	Variable	1.2	4.2	A.-Cu., Ci.	Cu. SW	------	☰ a.
9	57.83	25.9	31.6	20.7	78.4	Variable	.8	0	Ci.	S.-Cu.	------	☰ a.
10	58.48	26.2	32	22.3	77.2	N	1	1.7	A.-Cu.	Cu. ENE	------	☰ a.
11	58.64	26.5	32.2	21.4	72	NW quad.	1.2	1.2	Ci.-S.	S.-Cu.	------	☰ a.
12	58.85	25.8	29.5	22.3	69	NE	1.2	9	Ci.-S.	S.-Cu.	0.3	☰° d a. ●° p.
13	59.35	25.8	30.4	22.5	75.2	N quad.	1	7.7	Ci.-S.	Cu.	------	d° a.
14	59.52	26.7	31.9	23	72.2	N quad.	.8	8.3	Ci.-S., A.-Cu.	S.-Cu.	------	
15	59.11	26.8	32.4	22.9	74.7	Variable	1	3.8	Ci.	S.-Cu., Cu.	------	
16	59.25	26.7	32.4	23	75.4	Variable	1	2.3	Ci.	Cu. S	------	☰° a.
17	58.60	25.7	31.4	22	75	N	1.3	.2	Ci.	Cu.	------	
18	58.50	26.3	31.7	21	69.7	NE quad.	1.2	0	Ci.	Cu.	------	☊ ☰ a.
19	59.74	27.4	32.9	23.9	66.7	Variable	.8	0	Ci.	Cu.	------	
20	60.55	26.4	33	22.4	72.7	NE quad.	1	.2	Ci.	Cu.	------	
21	60.22	26.6	32.5	22	71.4	Variable	.8	1.7	Ci.	Cu.	------	☰ ☊ a.
22	59.86	27	32.2	23	72.8	Variable	1	1.8	Ci.	Cu.	------	☰° a.
23	60.18	25.3	31.5	21.1	76	NE quad.	1.3	.3	Ci.	Cu. N	------	☰ d° a.
24	59.61	26.8	31.4	21.8	72.5	Variable	1	3.8	A.-Cu.	Cu.	------	☋ a.
25	59	26.8	31.5	23.2	74	Variable	1.2	.8	A.-Cu.	Cu.	------	☰ a.
26	59.45	25.9	31.8	22.1	77.4	N quad.	1.3	0	Ci.	Cu. NEbyN	------	☰ ☊ a. ☋ p.
27	58.43	26.7	32.1	21.4	70.3	Variable	1	0	Ci.	Cu.	------	☰ a.
28	58.25	26.4	32.2	22	76	Variable	.7	.2	Ci.	Cu.	------	☋ ☰ a.
Mean	759.71	26.3	31.8	22.3	70.9	----------	1.2	2.1	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	.3	

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	766.11	22.1	25.4	18.8	71.7	NE	0.8	8.3	Ci.	S.-Cu. NE	------	☊ a. d p.
2	67.31	21.6	25.1	19.6	76.8	NW	1	9.3	Ci.-S.	S.-Cu.	1.3	☊ a.
3	66.64	20.8	25.8	18	86.2	NW	.8	8.3	Ci.	N.	3.8	● a. d p.
4	64.41	22.9	29.4	18	81.8	NW	.7	6.5	Ci.	Fr.-Cu. N	------	☊ a.
5	62.88	22.7	26	20.6	84.2	NW	2.3	8.7	----------	N.	------	d a. p.
6	61.46	23.8	27.5	20.6	86	N quad.	.7	9.3	Ci.-S.	Cu.-N. N	------	d a. p.
7	60.27	25.4	30.3	21	83.3	Calm	---------	6.3	A.-Cu.	Cu. NW	------	☊ a.
8	58.83	25.2	34.5	19.3	83	NE	1	4.7	Ci. S	S.-Cu. NE	------	☊ ◯ a. d p.
9	59.45	24	28	21.2	85.2	NW	.5	7.3	----------	Cu.-N. N, NW	3.8	☊ ● a.
10	59.87	25	29	20.7	77.7	NW, NE	1.7	7.5	----------	Cu. N	------	☊ a.
11	60.74	23.4	27.5	21.2	80.3	NE	1.2	9.2	----------	S.-Cu. NE	------	☊ a.
12	60.79	22.6	26.8	19.5	78.8	NE, N	.3	9.3	----------	S.-Cu.	2.8	d a. p.
13	60.45	23.6	28.6	20	85.5	Calm	---------	9.5	----------	Cu.-N. NW	14.7	● a. p.
14	60.60	23.2	27	20.6	92.3	NE	.7	10	----------	Cu.-N. NE	3	● a. d p.
15	59.84	25.4	31.5	21	87.3	E	.2	8	----------	Cu.-N. SW	------	● ≡ a. ⊤ d p.
16	59.06	26.2	33.3	21.6	86.2	SE	.5	6.2	----------	Cu. S	7.1	≡ ☊² a. ⊤ ⊓ ☓ ● p.
17	58.58	26.1	32.3	23.1	85.2	NE	.5	7	----------	Cu. S	------	d a. ≶ p.
18	59.37	25.3	30.5	22.5	82.5	NE, NW	1.3	6.5	----------	S.-Cu. N	------	☊ a.
19	60.45	25.2	32	21	81.3	SE, NE	.3	6.2	Ci.	Cu. SE, S	------	☊ a.
20	61.49	25.8	33	20.3	77.3	E	.2	6.5	Ci.	Cu. S	------	☊ a.
21	61.60	25.3	29.5	22	76.5	SE	.2	8.5	----------	S.-Cu.	------	☊ a.
22	60.02	26.4	32.4	21	71.5	SE	.7	5.2	Ci.	Cu.	------	☊ a.
23	60.04	26	33.5	20.5	74.5	NE	.7	3.5	Ci.	Cu. NE	------	☊ a.
24	60.51	25.4	30.8	21.1	78.3	NW	.5	7	Ci.	Cu.	------	☊ a. ◠ ∞² p.
25	59.60	26.4	33	21.5	69.8	SW	1.2	3.7	----------	Variable	------	☊ a. ∞² p.
26	59.88	25	34	16.6	66.1	NW	.5	0	----------	----------	------	☊ a. ∞ p.
27	58.92	25.3	33.8	18.1	73.2	ESE	.2	1	Ci.	Fr.-Cu.	------	☊ a. ∞ a. p.
28	58.32	26.7	34.6	21	73.2	SE	.2	5.3	Ci.	Cu.	------	☊ a.
Mean	760.98	24.5	30.2	20.4	79.8	----------	.7	6.7	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	36.5	

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters, gravity correction not applied, —1.57 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	766.98	22.4	24	19.5	64.2	ENE	20.6	10	----------	S.-Cu. ENE	------	
2	67.98	21.9	23.6	20.1	69	ENE	19.8	10	----------	S.-Cu. ENE	------	
3	67.16	21.9	24.6	19.5	73.2	ENE	15.9	10	----------	S.-Cu. ENE	------	
4	65.06	22.2	26	18.9	80.8	S, NE	9.3	10	----------	S.-Cu. SE	5	●° p.
5	63.97	21.4	24	19.5	87.7	NE	18.6	10	----------	Cu.-N. NE	3.4	●° ↙ a. p.
6	62.20	23.1	25.5	20.5	85	NE	14.3	9.7	----------	S.-Cu. ENE	------	
7	60.50	23.9	27.4	21.1	88	NE quad.	6.2	3.8	A.-Cu. SE	S.-Cu., Cu.-N. E	------	
8	59.36	24.1	29.6	20.8	85.5	Variable	11.5	4.8	Ci. NW	S.-Cu. N	1.4	●° p.
9	60.19	23.4	24.9	21.5	81.2	ENE	16.5	10	----------	s.-cu., cu.-N. ENE	------	●° a.
10	60.78	23.3	25.5	21.4	80.2	E quad.	15.4	8.7	A.-Cu. S	S.-Cu. ENE	------	
11	61.84	22.5	24	20.6	76.3	ENE, E	17.4	10	----------	S.-Cu. ENE	------	
12	61.41	21.6	23.5	19.7	83.8	E	15.3	10	----------	S.-Cu. ENE	4.8	●° p.
13	61.18	22.2	24.5	20.1	88	E, NE	15.2	10	A.-Cu. SW	S.-Cu., N. E quad.	.8	●° a. p.
14	61.40	22.8	24.4	21	87	NE	22.2	10	----------	S.-Cu. ENE	.3	●° p.
15	60.26	24.1	26.5	22	86.8	NE quad.	13.1	8.3	A.-Cu. S	S.-Cu. E, ENE	------	
16	59.40	25	31.1	21.8	86.2	SE, N	8.9	4.5	----------	S.-Cu. SW	------	⊤ p.
17	59.13	24.9	28.1	22.2	86.2	N, S	7.2	5.7	A.-Cu. W	Cu.-N. W, NNW	------	☊ a.
18	60.18	25	27.2	23	77.5	NE quad.	16	8.2	A.-Cu. SW	S.-Cu. N, ENE	------	☊ a.
19	61.25	24.3	27	21.6	78.2	NE quad.	18.6	5.5	----------	S.-Cu. ENE, E	------	a. p.
20	62.12	23.9	27	19.6	81.3	NE quad.	11	2.8	A.-Cu.	Cu.-N. E	------	
21	61.88	25.3	29.5	22.1	72.5	NE, E	9.6	9	A.-Cu. S	S.-Cu. SE	------	☊ a.
22	60.30	24.9	31	20.3	79.8	Variable	11.1	3	A.-Cu.	S.-Cu. SW	------	☊ a.
23	60.66	24.9	29.2	21.2	80.5	N	9.8	5	A.-Cu. W	S.-Cu. N	2.8	
24	61.03	24.2	27	22.6	82.8	NE	17.7	8.8	A.-Cu. S	Cu.-N. NE	1.3	● a. ●° a. p.
25	59.71	26.2	33	21.4	74	S quad.	11.5	.5	A.-Cu.	S.-Cu.	------	☋ p.
26	60.11	24.6	29.5	19.6	75.9	Variable	11.7	---------	----------	----------	------	☊ a.
27	59.11	24.4	30.2	18.6	80.7	Variable	8.8	.8	A.-Cu.	S.-Cu.	------	☊ a.
28	58.62	25.8	30.5	22.6	79.3	S, ENE	10.4	.2	Ci.	----------	------	☊ a.
Mean	761.56	23.7	27.1	20.8	80.4	----------	13.7	6.8	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	19.8	

METEOROLOGICAL DATA, FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	22.1	97	73	9	9	------	☊ a.
2	28.5	24.9	84	83	9	9	2.3	☊ a.
3	30.6	23.4	89	71	10	8	1.3	●° a.
4	31	22.4	95	75	10	9	2.8	● a.
5	31	22.1	97	80	8	9	1	☊ a. ●° p.
6	30.6	22.6	98	77	9	8	------	☊² ≡ a. d p.
7	31	22.9	97	82	8	10	1.8	☊² ≡ a. ● p.
8	31.7	21.1	96	67	8	7	------	☊ a. ○ p.
9	31	21.8	97	83	8	9	2	☊² ≡ a. ●° p.
10	30.5	22.1	97	82	8	10	------	☊ a. d p.
11	29.5	21.4	91	86	9	9	11.9	☊ a. ● d p.
12	30.6	22.2	96	78	10	8	------	● ◠ a.
13	30.7	22.3	96	75	8	8	------	☊ a. d p.
14	28.3	23.2	96	90	9	10	2.3	☊° d² a. ● p.
15	31.2	21.2	96	66	9	8	1	☊² ≡ a. d p.
16	29.7	21.3	96	76	9	9	------	☊² ≡ a. ☋ p.
17	31.9	22	97	72	8	8	------	☊² ≡ a. ☋ p.
18	31.5	23.3	97	71	9	8	------	d ≡ a.
19	32.7	21.8	96	63	8	8	------	☊² ≡ a.
20	31.6	20.6	93	70	8	7	------	☊² a.
21	28.9	21.5	97	86	9	9	7.4	☊ a. ● p.
22	31.6	21.7	95	73	9	7	------	☊ a.
23	31	23.1	89	74	8	8	------	
24	31.2	24.1	96	64	9	7	------	☊° a.
25	31.9	20.9	93	80	7	8	1.3	☊° a. ●° p.
26	29.8	22.4	94	92	7	10	31	☊ d a. ● p.
27	29.8	20.9	97	81	9	9	------	☊ a.
28	29.8	22.2	95	82	9	9	------	☊² ≡ a. d a. p.
Mean	30.7	22.2	94.9	76.9	8.6	8.5	------	
Total	------	------	------	------	------	------	66.1	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	22	96	71	10	10	------	≡° ☊ a.
2	30.8	23.5	88	76	10	10	19.6	d a. ● p.
3	31.3	23	94	75	10	9	.3	● d a.
4	32.8	22.6	96	69	10	7	------	☊ a.
5	30.8	22	96	71	10	9	------	☊ a. d p.
6	31.3	21.6	95	79	10	9	1.8	≡° ☊ a.
7	33.3	23.3	96	56	10	8	------	● d a.
8	30.8	21.5	96	85	9	10	.8	☊ a. p p.
9	31.3	22	92	81	5	5	------	☊ a.
10	34.8	22	96	81	10	10	12.4	☊ a. ● ⌐⊿ p.
11	29.8	22.4	96	87	10	10	8.6	d a. p. ● p.
12	30.9	22	96	78	10	10	------	☊ a.
13	29.3	21.9	96	79	9	10	3	☊ a. d p.
14	31.5	22	96	74	10	10	1	● a. p ◠ p.
15	29.8	22	97	80	10	10	------	☊ a. d p.
16	31.3	21.5	96	76	10	10	------	≡° ☊ a.
17	29.8	22.7	96	80	9	10	2.5	☊ a. ● ◟ p.
18	33.1	22.3	96	78	10	9	1	≡° ☊ a. p p.
19	32.8	22.5	95	73	7	9	------	
20	33.5	21.7	96	63	10	3	------	≡° ☊ a.
21	30.8	22	96	78	10	6	5.6	⊤ ● a.
22	32.8	23	96	75	9	8	------	☊ a.
23	31.3	22.5	96	75	10	9	------	☊ a.
24	30.8	21.5	96	68	9	9	------	≡° ☊ a.
25	32.8	22	96	75	10	9	------	☊ a.
26	30.8	22	91	81	10	9	------	☊ a.
27	30.8	22.5	96	81	10	10	------	◟ d p.
28	32.3	23	96	75	10	10	------	d a.
Mean	31.6	22.2	95.3	75.8	9.5	8.9	------	
Total	------	------	------	------	------	------	56.6	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	22.6	87	74	3	9	------	○ p.
2	32.6	23.7	82	76	10	9	3.8	d°a.
3	31.1	23	91	64	10	9	------	●° a.
4	32.8	22.9	88	69	3	5	------	≡° ☊° ○ a.
5	29.6	22.9	91	72	3	3	------	◟ p.
6	30.4	22.3	88	71	3	9	------	☊ a.
7	31.6	24	88	67	9	8	------	○ p.
8	30.5	22.9	89	78	8	8	------	
9	30	23	90	72	6	3	------	≡ ☊° a.
10	29.1	23	83	77	3	9	26.7	⌐⊿ ●² p.
11	30.3	22.5	88	81	10	10	11.2	d° a. ● ⌐⊿ p.
12	28.5	23	94	81	9	9	------	
13	28.4	21.8	93	86	9	10	1	d° p.
14	30.6	22.9	92	70	10	9	------	● a.
15	27.8	22.9	95	80	8	9	4.8	☊ ≡ a. ● d° p.
16	28.2	22.4	87	83	9	9	------	≡ d a.
17	29	22.9	84	85	7	9	2.8	⌐⊿ ● p.
18	31.1	22.7	92	69	9	9	33.8	
19	30.4	21	96	69	10	7	7.6	●² d ◠ a.
20	31.7	21.7	93	75	10	9	------	≡ ☊ a.
21	29.4	23.3	91	77	7	3	15.2	☊ ≡° ◠ a.
22	30.3	23.3	86	77	7	6	------	d a.
23	29.1	23.6	90	77	10	10	------	d a. p.
24	29.1	21.5	82	71	6	8	------	≡ ☊° a.
25	31.6	22.4	88	64	2	9	------	≡ ☊° a. d° p.
26	29.6	24	92	71	6	9	------	
27	29	22.9	92	77	10	10	------	d° p.
28	32.1	23.5	89	63	10	8	------	d p.
Mean	30.2	22.8	89.1	74.2	7.4	8	------	
Total	------	------	------	------	------	------	106.9	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.5	21.4	92	76	7	9	------	
2	29.1	21.3	93	77	8	8	11.7	● p.
3	26.7	21.9	99	90	10	8	21.1	● a. d p.
4	30.6	20.7	99	70	8	7	------	
5	32.2	20.8	96	75	7	6	25.9	●² p.
6	28.6	22.4	92	79	10	8	11.2	● a.
7	30.8	20.4	96	66	7	7	------	
8	30.4	20.9	96	73	7	7	------	
9	33.1	22.1	96	62	6	7	13.2	● p.
10	28.1	23	97	84	8	6	34.8	≡ a. ● a. p.
11	30.2	22.1	99	75	7	7	30.5	●° p.
12	31.6	21.1	96	66	6	6	12.7	● p.
13	25.6	21.9	93	92	10	10	43.7	● a. ●² p.
14	31.1	20.7	96	69	9	7	38.1	●° a. ● p.
15	25.6	21.2	96	93	9	10	19.3	● a. p. ☋ p.
16	29.3	21	98	80	6	7	------	
17	31.9	22.3	97	73	6	7	------	
18	32	22.4	96	71	6	6	------	
19	31.6	21.7	96	73	5	6	------	
20	32.2	20	95	71	7	6	------	
21	33.7	22	97	64	6	5	------	
22	32.7	21.9	96	62	5	6	------	
23	28.6	21.8	94	74	10	8	23.6	● a.
24	30.2	20.2	91	72	6	10	11.9	● p.
25	27	21.9	93	84	7	9	21.1	● p.
26	30.7	21.1	97	73	7	8	------	
27	31.5	22.4	93	67	6	7	33.8	● p.
28	28.5	22.5	96	85	8	9	------	
Mean	30.1	21.5	95.5	74.9	7.3	7.4	------	
Total	------	------	------	------	------	------	352.6	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	21.2	92	69	10	10	------	
2	30	22.1	93	70	10	10	45.7	●² p.
3	29	21	93	81	10	10	------	d p.
4	32.4	21.6	93	64	2	3	------	☊ a. ☇ p.
5	32.6	21.2	93	63	2	4	20.3	◠ ●² ⌐◪ p.
6	29.8	19.2	93	74	10	10	1.5	d a. p ● ☇ p.
7	32.6	21	95	60	10	6	7.6	☊ ≡² a. ● ☇ p.
8	32	21.6	93	57	4	2	------	≡° a. ☇ p.
9	33.5	21.6	93	64	2	8	------	☊ a.
10	32	21.2	95	67	8	10	3.8	☊ ≡² a. ● ☇ p.
11	31.8	22.1	91	67	4	8	19	≡ a. ● p.
12	31	21	97	63	3	6	------	≡° a.
13	32.3	22.3	93	86	10	10	1.3	●° a. d a. p.
14	31.6	21.4	94	66	10	10	2.5	☊ ≡² d a. ● ⌐◪
15	30.6	21.6	93	82	8	10	------	≡ a. ●° d p.
16	31	21.6	93	65	8	10	------	≡ ☊ a. d ☇ p.
17	33	23	90	62	4	10	------	☊ a. d ☇ p.
18	32.1	23	93	60	10	4	------	≡² a. ◡ p.
19	33.1	22	93	51	4	6	------	≡ ☊ a.
20	32.6	21	97	53	4	3	------	☊ ≡° a.
21	33	22	93	60	2	4	------	☊ a.
22	34.2	21.6	97	60	7	4	11.4	d ●² ⌐◪ p.
23	31	21.1	90	66	10	8	------	d a.
24	33	21	93	55	10	8	------	◡ p.
25	31.2	21.2	94	62	2	9	2.5	●° p.
26	32	21	91	66	8	8	------	
27	31	21.3	92	64	8	9	12.7	⌐◪ ● p.
28	30.5	19.5	91	77	10	10	------	
Mean	31.8	21.4	93.1	65.5	6.8	7.5	------	
Total	------	------	------	------	------	------	128.3	

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	21.2	90	65	9	8	------	☊° a. ⊕ p.
2	31.2	22.1	92	71	9	9	7.6	☊² ≡ a. d² p.
3	24.6	22.4	96	91	9	10	8.1	d° a. p.
4	31.5	21	96	60	8	4	------	
5	31.2	21.1	95	71	2	7	3.8	☊² ≡ a.
6	29.3	22.7	97	78	10	9	2.5	d a.
7	30.2	20	96	74	3	9	------	☊² ≡ a.
8	30.9	20.7	96	65	3	8	------	☊² ≡ a.
9	31.8	21.3	93	66	6	7	------	☊² ≡ a.
10	30.8	22.2	96	82	7	10	4.1	☊ ≡ a. d° p.
11	31.1	22.9	93	76	9	9	------	
12	31.4	19.9	86	62	4	3	2.5	☊² ≡ a.
13	26.4	22.3	97	84	10	10	5.3	d a.
14	30.2	21.4	94	74	9	9	2.5	
15	27.1	21.4	95	80	10	9	4.6	d° a.
16	30.9	21.2	95	75	4	9	1.3	d° a.
17	31.4	22.5	97	76	3	9	2.5	d a. p.
18	31.1	21.5	94	70	9	3	------	
19	31.8	21.2	94	71	9	4	------	
20	32	19.6	92	69	4	4	------	☊² ≡ a.
21	32.7	20.9	90	60	4	3	------	☊² ≡ a.
22	31.4	21.5	94	71	2	3	1.3	☊² ≡ a. ✓° p.
23	31.7	22.9	90	58	4	9	------	d a.
24	31.2	24	95	70	9	9	------	
25	30.1	20.6	93	77	9	9	------	d° ☋ p.
26	32.6	21.2	93	60	8	9	------	
27	32.2	22	93	71	8	9	------	☋ ☊ a.
28	30.8	22	93	72	8	8	------	
Mean	30.7	21.6	93.8	71.4	6.8	7.5	------	
Total	------	------	------	------	------	------	46.1	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	23.8	89	69	10	10	------	○ p.
2	27.8	22.9	88	81	10	10	3.6	● a.
3	25.5	22.3	88	81	10	10	------	● a.
4	30.6	23.8	80	64	7	5	------	
5	32	25	80	65	4	4	5.8	● p.
6	30.5	23.9	78	74	9	9	4.3	● a.
7	28.7	24	85	71	7	9	2.3	● a.
8	31.6	23.6	82	66	9	7	------	
9	32.3	22	84	65	9	0	------	☊ a.
10	30.7	24	88	67	9	9	29	●° a. ○ ● ☇ ⊤ p.
11	29.9	23	85	78	10	10	6.1	● ⊤ a. ☇ p.
12	30.8	24.4	82	69	8	5	------	
13	27.5	23	82	87	10	10	4.8	●° a. ● p.
14	31	24.1	85	69	2	7	------	
15	27.8	24.2	86	73	10	10	1.8	● a. ○ p.
16	32	24.1	83	65	7	5	------	☊ a. ⊕ p.
17	31.6	24.2	89	62	10	4	11.4	● a.
18	29.9	24	87	71	9	10	1.8	●° a.
19	32.2	24.5	85	62	10	6	------	● a. ☋ p.
20	30.3	23.4	84	66	9	8	------	
21	32.4	23.5	82	67	6	5	------	
22	31.8	22.4	92	65	7	6	------	
23	32.1	24.3	87	67	9	7	------	
24	30.8	23.5	84	78	6	10	------	○ p.
25	30.4	24.5	83	73	10	8	8.9	● a.
26	30.4	23.7	82	74	10	10	------	● a. ○ ☇ p.
27	29.3	24.2	81	77	10	7	------	
28	31	23.9	94	73	8	5	------	
Mean	30.4	23.7	84.8	70.7	8.4	7.4	------	
Total	------	------	------	------	------	------	79.8	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.2	22.4	96	82	7	10	17.5	● a. d ●² p.
2	28.2	22.6	96	82	9	9	37.3	● a. p.
3	24.1	22	97	95	10	10	40.1	● a. p.
4	29.3	21.9	90	81	9	7	1.3	✓° a. p p.
5	29.1	22	96	78	7	9	35.6	☊ a. ●² p.
6	28.1	22.4	94	81	10	10	------	●² a. ○ p.
7	29.6	21.9	96	75	7	7	.8	☊ ●° a.
8	29.9	21.8	96	66	6	8	------	☊ ⊕ a.
9	30.5	22.4	94	73	7	6	------	☊² a. d° p.
10	27.3	23.1	96	88	7	10	14.8	d ●° a. ● p.
11	27.6	22	95	77	10	8	2.3	● a.
12	29.6	22.5	93	72	8	7	16	☊² a. ● p.
13	24.5	22	96	96	10	10	26.9	● a. p.
14	28.5	22.6	94	88	9	9	50.2	☊ d° a. ● p.
15	27.3	22.2	96	86	10	9	29.7	● a. d p.
16	28.3	22.9	93	78	10	8	3.3	☊ d° a. ● p.
17	28	22.2	94	96	6	10	15.5	☊² a. ⊤ ● p.
18	28.7	22.3	97	91	8	8	3.1	☊² a. ● a. p. ⊤ p.
19	30.5	23.1	94	80	7	7	1	☊ a. ● p.
20	26	22.5	94	92	10	7	17	● a. ●° ⊤ ☋ p.
21	28.5	22.4	92	77	3	8	1.3	☊ ●° a. ●° ◠ p.
22	28	21.4	97	74	7	8	10.4	≡² ☊ a. ⊤ ●² p.
23	28.1	20.5	96	69	6	7	------	☊² a.
24	26.3	21	95	79	6	10	1	☊² ≡ a.
25	26	22.8	97	89	10	10	2.3	● a. p.
26	29.8	23.1	95	75	7	7	7.4	☊ a.
27	28	22.6	99	92	10	10	18.8	≡ a. ● a. p ⊤ p.
28	29.2	21.4	97	64	7	8	------	☊ ≡ a. ⊕ p.
Mean	28.1	22.2	95.2	81.3	8	8.5	------	
Total	------	------	------	------	------	------	353.6	

METEOROLOGICAL DATA, ETC.—Continued.

YAP (Western Carolines).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	24	82	65	7	8	1	● p.
2	30.8	24.5	89	75	9	9	------	☿° p.
3	30.8	25.4	82	74	9	9	13.7	☌° a. ☍ p.
4	26.5	23.6	97	96	10	10	19.1	● ☌ a.
5	31.3	23.5	79	69	7	6	------	
6	31.8	23.5	83	71	5	5	12.7	☌ a. ● a. p.
7	31.4	24.6	89	70	7	4	1	☌ a. ●° p.
8	31.8	24.4	90	73	7	6	------	♌ a.
9	32.6	23.7	96	66	6	4	------	♌² a. ♌ p.
10	30.8	24.2	91	69	9	8	1.5	♌ ☌° ●° a.
11	30.2	25	90	88	8	7	5.6	♌ ● a. ☌ ☾° p.
12	31.3	24.8	93	72	9	6	------	● a.
13	31.8	24.8	96	71	6	6	------	♌ ◯ ☌° a.
14	32.1	25.8	84	72	6	6	------	☾° ☿° ☌° p.
15	28.8	24.5	90	86	8	10	22.6	☌° ● a. p.
16	30.7	24.6	98	72	8	6	6.1	●◯ ⊕² a. ☾ ☿ ☌²
17	31.7	25	82	63	5	4	------	◯° a. p. ☿ ☾° p.
18	33.1	21.4	91	55	3	6	------	♌² a. ◯ ☿² p.
19	31.9	23.6	88	72	9	7	------	♌ a. ⊕ ☿ ☾° p.
20	32.8	24.6	91	69	6	7	------	☌° a. ◯ ☾° ☾° ☿
21	------	24.6	89	------	8	9	2.8	♌ a. ☌² a. p. ☿ p.
22	30.7	24.1	83	64	9	7	------	● a. ☿ p.
23	27.9	25	78	84	8	8	18.3	● a. ●° ☿² ☾ p.
24	29.6	23.8	87	79	7	7	.5	☌² a. ◯° a. p.
25	30.1	24.7	82	73	7	9	19.3	●° p.
26	31.7	24.3	92	68	9	8	------	● a. ☌° ☿ p.
27	30	25.4	83	75	5	8	1.8	☿° ☌² a.
28	31.4	24.6	87	68	6	8	2	●° p.
Mean	30.9	24.4	87.9	72.6	7.2	7.1	------	
Total	------	------	------	------	------	------	128	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	22.5	91	83	10	10	62.7	☌ ● a. p.
2	28	22	93	83	10	10	92	● a. p. ☰ ☾ p.
3	27.8	22.6	90	89	10	10	73.7	● a. p. ☾° p.
4	28.6	22.9	90	70	10	6	------	☌ a.
5	29.6	22.8	91	80	10	10	16.5	☌ ◠° a. ☾² p p.
6	29.7	22.4	96	74	10	10	------	
7	29	22.6	93	75	10	10	------	☌ ◠² ☾ p.
8	29.8	23.1	90	82	10	10	------	
9	29.6	22	94	68	10	6	------	☌ ◠° a.
10	29.5	23	91	77	10	10	------	◠° a.
11	29.5	22.8	93	68	10	7	------	☾ p.
12	30.8	22	95	80	10	10	14.9	p a. p. d ◠² ☾ ²p.
13	29	22.4	87	80	10	10	------	d a. p. ◠° ☾² ☾p.
14	27.5	22.7	95	86	10	10	13.2	☌² p p.
15	28	22.5	91	83	10	10	20.8	p ☰ a. ☌ ⊥² p.
16	28.6	24.2	95	77	10	10	------	☾ ☾ p.
17	29	23	95	81	8	10	8.6	p p.
18	29	22.8	93	85	10	10	------	☿² p.
19	29.5	22.8	95	82	10	10	------	☍ ☿ p.
20	30	22.1	86	79	10	9	49.3	● a. p. d ◠° p.
21	28.5	22.8	93	81	10	10	------	d p.
22	29.9	21.3	93	79	3	8	------	
23	29	21.8	88	77	10	7	------	☿ ☾ p.
24	28.9	21.8	84	76	10	6	------	
25	29	22.4	91	75	10	10	------	
26	29.5	23.4	87	67	10	8	------	
27	30	23	95	94	10	10	8.7	p. d² p.
28	29.4	22.4	86	67	10	10	------	☿ ☾ p.
Mean	29.2	22.6	91.5	78.5	9.7	9.2	------	
Total	------	------	------	------	------	------	360.4	

SAN JOSE BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.5	23	91	82	10	10	3.8	☌ a. ● p.
2	26.3	22.5	88	87	10	10	.5	☌ a. p.
3	28.7	22.7	93	70	10	10	1.3	☌ ●° p.
4	31.1	22.5	93	75	10	10	------	☌ p.
5	31.5	21.5	92	70	3	6	------	☌ p.
6	32	22.3	90	64	2	3	------	
7	32	21.2	91	63	3	3	------	
8	31.8	21	89	69	2	10	------	
9	31.9	22.8	90	70	2	3	------	
10	32.7	22	91	65	3	4	2	●° p.
11	32.4	23.9	95	67	10	10	------	●° a. ◠ p.
12	32.9	21.2	91	59	7	7	------	
13	32.3	22.7	88	69	6	10	------	
14	32.2	22.3	91	59	10	8	4.8	♌ a. ● ⊤ p.
15	31.4	22.5	90	69	10	10	------	♌ ☌ a.
16	32	22.9	94	85	8	8	1.5	● p.
17	32	22.7	90	64	4	4	------	
18	33	22	91	64	8	2	------	⊤ p.
19	32.8	23.2	88	64	6	10	------	
20	34.4	23.4	86	81	10	10	------	
21	32	22	88	65	1	10	------	
22	32.6	20.4	83	57	1	1	------	☾ p.
23	32.6	19.5	81	51	2	1	------	☾° p.
24	32.7	19.6	69	49	10	1	------	
25	30.9	20.9	84	62	8	10	------	
26	30.6	21.8	87	68	8	10	4.8	● ☌ a. p.
27	31	21.8	95	79	3	10	2.5	● ⊤ p.
28	31	21.3	94	74	10	10	------	♌ a.
Mean	31.6	22	89	67.9	6.3	7.2	------	
Total	------	------	------	------	------	------	21.2	

BORONGAN.

[$\phi = 11°\ 37'$ N; $\lambda = 125°\ 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.4	20.6	97	89	9	10	89.1	●² a. p.
2	27.2	20.3	94	89	10	10	31.2	●² a. p.
3	25.7	21.7	94	92	10	10	32.2	●² a. p.
4	26.8	21.9	96	89	10	10	35	●² a. p.
5	29.5	22.8	96	82	9	8	83.6	●² p.
6	29.2	22.2	97	78	5	8	8.1	☰ a. ● p.
7	29.7	22.4	90	82	9	7	18.3	☰ a. ● a. p.
8	29.5	22.5	96	80	10	8	7.1	● a. p.
9	28.3	22.5	96	76	9	10	10.7	☰ a. ● a. p.
10	30.1	22.8	94	76	9	8	1.5	● a.
11	30.3	22.4	96	71	9	6	11.4	♌ ☰ a
12	28.3	23.1	96	80	9	10	38.1	● a. ●² p.
13	29.6	22.9	97	78	9	8	4.4	● a.
14	29.5	22.4	93	81	9	9	28.2	● a. ●² p.
15	30.2	23.1	94	74	8	10	16	● p.
16	29.2	23.7	96	83	10	8	15.7	● a. p.
17	30.1	22.9	96	76	7	6	13.7	☰ ◯ a. ● a. p.
18	29.8	23.6	97	78	10	8	2.8	● a. ●° p.
19	29.5	23.5	96	89	9	10	4.3	☰ a. ● p.
20	29.7	23.2	95	88	8	7	11.2	●° a. ● p.
21	29.5	24	96	78	8	9	------	
22	30.2	21.6	96	76	8	9	------	♌ ☰ a.
23	30	20.4	95	62	3	6	.5	♌ ☰ a. ☾ ●° p.
24	28.7	20.9	96	85	9	10	4.3	☰ a. ● p.
25	29.2	21.7	96	79	10	10	------	
26	29.7	24.3	94	78	9	6	13.7	♌ ☰ a. ● p.
27	30	22.5	95	79	10	8	6.8	● a. p.
28	30.3	21.7	96	67	8	9	------	☰ a.
Mean	29.3	22.4	95.4	79.8	8.7	8.5	------	
Total	------	------	------	------	------	------	487.9	

METEOROLOGICAL DATA, ETC.—Continued.

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	24	22.5	99	97	10	10	100.3	
2	25.2	22.4	96	87	10	10	44.7	
3	26.5	22.4	97	92	10	10	56.6	
4	27.8	22	99	88	10	9	5.8	
5	27.6	23	98	98	10	10	1.8	
6	31	23.6	------	76	9	8	------	
7	30.4	24.2	97	78	8	9	.3	
8	31.2	23.8	97	75	10	8	.3	
9	30.5	25	97	77	10	7	------	
10	31.5	23.6	98	78	9	8	------	
11	30.8	23.5	98	72	8	6	------	
12	30.4	23.4	97	95	8	10	34.3	
13	30.2	22.8	98	80	10	8	.3	
14	30.6	23.6	98	81	9	8	.8	
15	30.5	23.2	98	------	9	8	4.6	
16	30.2	24	98	94	9	9	9.1	
17	30.5	24.4	97	74	8	8	------	
18	30.5	23.2	98	76	8	6	.3	
19	30	23.4	98	83	10	10	2.8	
20	31.2	23.6	97	80	7	8	.3	
21	31.4	23	98	74	8	7	------	
22	30.4	23	89	74	8	7	------	
23	29.6	22.2	97	78	7	8	------	
24	28.6	23	98	98	8	10	1.5	
25	31.2	23.2	96	92	8	9	.5	
26	29.4	24.2	98	97	10	8	------	
27	30.2	23.6	98	94	9	8	------	
28	30.5	23.5	97	79	9	8	------	
Mean	29.7	23.3	97.3	84	8.9	8.4	------	
Total	------	------	------	------	------	------	264.3	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	25.5	22.4	96	90	10	10	18.5	●² a. ●° p.
2	25.1	22.1	79	79	10	10	2.3	d ●° p.
3	26.5	22.6	81	78	10	10	4.4	d a. ●° p.
4	28.8	23	90	78	10	8	.8	●° a.
5	28.7	23	91	76	10	7	1.8	●° a. p p.
6	29	23.2	93	75	6	6	.3	●° a.
7	29.3	23.7	91	73	10	5	1.3	p a.
8	29.6	24.5	92	76	10	8	1.6	d a.
9	29.4	24.2	93	74	10	5	1.3	p ●° a.
10	30	24.9	91	70	8	4	15.2	d a. ☾° p.
11	28.7	23.5	97	76	10	8	10.7	● d° a.
12	28.1	23.7	91	80	8	9	4.9	d° ∞ a. ●° a. p.
13	26.4	22.7	93	86	10	10	29.5	● a. d p.
14	29	24	88	82	9	10	------	d° p.
15	30.3	23.6	87	71	9	5	------	∞ a.
16	30	24.2	88	74	8	7	24.1	●² p.
17	30.1	24.2	91	73	6	5	------	●² a.
18	30.1	23.7	91	70	6	3	------	∞ a.
19	28.4	24.1	81	78	9	9	4.5	●° p.
20	29.3	24.1	93	72	7	5	.5	p a. p. ♉ p.
21	29.3	24.2	85	65	5	3	------	
22	29.6	23.2	75	59	4	1	------	
23	29.8	20.2	95	66	7	3	------	Ω a.
24	29.9	21	92	62	8	4	------	
25	30.2	23.6	75	62	3	6	------	
26	29.1	24.5	84	77	9	9	2	d° a.
27	30.6	24.1	87	61	6	5	------	
28	30.4	23.2	86	69	9	9	------	
Mean	29	23.4	88.4	73.3	8.1	6.6	------	
Total	------	------	------	------	------	------	123.7	

LAOANG.

[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	25.6	21.7	96	97	10	10	187.9	●² a. p.
2	25.4	21.5	98	99	10	10	51.8	● a. p.
3	26.8	22.2	92	95	10	10	41.6	● a. p.
4	28.6	21.4	93	77	7	4	23.9	● a. p.
5	28.8	22.2	95	88	8	8	5.8	● a. p.
6	29	22	92	65	4	3	4.1	● p.
7	29	23.2	96	79	4	8	7.2	● a. p.
8	29.2	23.2	97	92	5	8	1	● a. p.
9	29.6	22.7	96	75	4	4	1.5	● p.
10	29.6	22.5	92	74	6	5	.3	● p.
11	29.7	21.6	93	72	6	6	.8	● p.
12	28.4	21.9	96	80	7	8	67.3	●² p.
13	28.6	22	98	91	8	8	9.2	●² a. ● p.
14	28.8	22.5	91	77	8	8	14.7	● a. p.
15	30.5	23.2	89	68	7	6	8.4	
16	30	23.3	95	73	9	7	4.3	
17	29.2	23.1	95	79	8	6	.3	
18	29.6	21.6	92	75	4	7	16.3	
19	27.6	22	97	82	8	8	2	
20	29.4	23.4	88	76	7	6	------	
21	29.2	24.1	83	70	5	7	------	
22	29.1	19.6	86	80	4	6	3	
23	29	20	95	52	8	4	2.3	
24	28.1	21.3	96	70	8	7	3	● a. p.
25	29.6	23.9	84	74	8	9	22.9	●² p.
26	29.3	22.6	98	74	7	8	------	
27	29.7	22.8	94	77	7	8	------	
28	29	21.4	94	75	5	8	------	
Mean	28.8	22.2	93.2	78.1	6.9	7	------	
Total	------	------	------	------	------	------	479.6	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.8	19.2	90	88	10	10	84.3	● ↙° a. p.
2	29.8	20.3	90	88	10	10	31.2	● a. p. ↙ a.
3	27	21.6	96	88	10	10	33.5	● a. p. ↙° p.
4	30.3	22	98	82	8	6	------	
5	31	21.9	93	80	9	6	13.7	● p.
6	31.2	22	99	81	7	6	------	
7	31.7	21.9	98	81	7	8	2.3	●² p.
8	30	23	98	88	8	6	3.8	p² ⌒ p.
9	30.1	23.3	97	81	5	5	2.3	p² a. p p.
10	31	23.1	97	81	7	6	1.8	p a.
11	30.9	23.3	95	82	5	4	------	
12	30	22	97	89	10	10	7.4	p² a. ● p.
13	29.4	22.2	97	80	10	7	.8	p² a.
14	29.3	23	98	89	6	5	------	
15	31.8	23.5	98	76	6	5	------	
16	32	24.4	98	82	7	6	------	
17	31.5	25	98	87	4	6	------	
18	30.9	22	98	87	7	5	------	
19	30.7	21.8	95	81	10	10	11.7	p a. p.
20	30.2	22	98	81	9	5	------	
21	30	23	99	79	7	6	------	
22	29.9	19	94	75	4	7	------	
23	30.1	21.2	96	74	8	5	------	
24	30.8	22	97	88	6	4	4.6	●² p.
25	31	24.2	97	83	7	6	3.3	●² a.
26	32	23.3	99	84	10	7	1.3	p a.
27	31.6	24.2	98	81	6	5	------	
28	31.6	23	97	75	7	5	------	
Mean	30.6	22.4	96.6	82.5	7.5	6.5	------	
Total	------	------	------	------	------	------	202	

METEOROLOGICAL DATA, ETC.—Continued.

SUMAY, GUAM (Ladrones Islands.)

[$\phi = 13°\ 24'$ N; $\lambda = 144°\ 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.4	24.2	79	70	6	8	------	
2	28.6	25.2	84	64	10	10	7.6	
3	29	23	92	68	10	10	1.3	
4	28.4	25.4	79	68	10	10	.5	
5	29	23.6	84	69	6	8	.8	
6	28.4	24.2	84	69	6	10	1.3	
7	29	24.6	87	64	6	3	------	
8	30	24.6	83	64	2	10	------	
9	31.2	24.8	83	65	4	5	------	
10	29.4	22.2	88	71	10	4	------	
11	30.6	24	84	80	3	8	6.4	
12	28.4	23	85	68	6	8	16	
13	27.4	22.8	91	72	10	9	4.6	
14	29	24.8	83	62	8	10	------	
15	27.6	25.2	84	81	2	10	.5	
16	26.6	22.8	83	88	6	10	10.2	
17	28.4	23.6	92	70	6	6	1.3	
18	30.2	22.6	84	63	3	3	------	
19	28.4	21.6	88	70	1	1	------	
20	28.4	22	83	73	1	3	2.5	
21	27.4	23.4	84	77	3	8	------	
22	27	25.2	76	69	6	8	------	
23	27.4	24.6	76	64	10	8	------	
24	29	24.2	83	65	10	10	------	
25	28	24.8	80	66	10	10	------	
26	29.6	24.8	77	58	10	8	2.5	
27	28	23.8	83	67	8	7	.5	
28	29	23.8	83	66	2	5	------	
Mean	28.6	23.9	83.6	69	6.2	7.5	------	
Total	------	------	------	------	------	------	60.5	

CALAPAN.

[$\phi = 13°\ 25'$ N; $\lambda = 121°\ 11'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27.4	21.5	83	74	10	10	0.5	☊° a.
2	26.4	21.5	75	73	10	10	------	☊° p.
3	26.2	22.2	84	82	10	10	------	☊° a. p.
4	27.4	22.5	90	82	10	10	1	☊° p.
5	28.5	23.1	95	84	10	10	2.8	☊° p.
6	29.6	22.9	91	79	8	9	------	☽ ☌° p.
7	29.7	23.9	92	67	10	4	.5	☾ ● p.
8	29.7	23.6	98	73	10	9	1.3	☰ a. ☊° p.
9	29.1	23.6	98	77	10	10	3	☊° p.
10	29.5	24	97	72	10	5	------	● ☰ a.
11	29.5	23.1	96	84	10	10	7.9	♌ ☊° a. ●² p.
12	25.6	20.5	97	80	10	10	1.3	● a.
13	27.8	22.1	99	82	10	7	13.7	☰ ☊° a. ●° p.
14	28.8	23	97	77	10	7	18.8	● a. ●² ☋ p.
15	30.2	22.9	94	72	10	9	------	
16	29.5	22.5	97	68	4	3	------	♌ a.
17	29.6	23.6	97	74	10	2	.8	♌ a.
18	30.8	22.6	95	63	10	2	------	
19	31	22.6	82	61	9	9	17.3	●² p.
20	30.2	23.1	97	75	10	9	14.7	●² a. ☿ ☋ p.
21	29.6	24.1	84	60	10	5	------	☿ ☿ ☿ ☋ ☋° p.
22	29.6	22.4	98	60	9	4	------	☿ ☿ ☋ ☋ ☋° p.
23	30.5	19.9	87	55	4	6	------	☿ ☿ ☋ ☋ p.
24	29.4	22	91	58	9	6	------	♌ a. ☿ ☋ p.
25	29.6	24	87	66	10	4	.8	
26	30	22	89	68	10	6	6.1	
27	31.1	23.6	91	56	10	4	------	●² a. ☋ ☿ p.
28	30	21.5	90	70	10	10	------	☊° a.
Mean	29.2	22.7	91.8	71.1	9.4	7.1	------	
Total	------	------	------	------	------	------	90.5	

VIRAC.

[$\phi = 13°\ 35'$ N; $\lambda = 124°\ 14'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.1	23.3	81	70	10	8	7.1	☽ ● a. p.
2	28.9	23.4	79	77	10	10	10.2	☽ a. ● a. p.
3	30	22.6	76	74	8	8	8.4	● ☽ a. p.
4	29.5	22.4	90	69	10	7	12.7	● ☰ a. ●° ☽² p.
5	29.9	23.5	92	74	10	9	.6	●° a. p. ☽ p.
6	30.1	22.4	88	74	8	5	6.4	● ☽ a. ●° ☰ p.
7	30	24.2	85	71	5	7	3.3	●° a. p. ☽ p.
8	30.7	24.6	92	72	8	8	------	☰ ☽ a. ☌° p.
9	29.5	24	91	71	8	8	9.4	● ☽ ☰° a. ●° p.
10	30	22.7	95	72	8	7	16.3	☌° ☽ a. ● p.
11	29.6	24.5	92	80	8	7	.8	☽ ☌° a. ●° p.
12	29.3	23	96	89	10	10	101.6	● a. p.
13	27	22	96	88	10	10	64.5	☰ a. ● a. p.
14	29.6	22.4	85	70	9	5	------	☰ ☌° a. ☌° ☿ p.
15	30.2	25.4	84	75	7	8	1.8	☰° ☽° a. ●° p.
16	30.6	24.5	86	70	8	7	.5	●° ☰° a. ☽° ☿° p.
17	29.9	22.6	95	77	3	4	------	☰° a.
18	30.5	20.4	96	64	2	7	------	♌° a. ☿² p.
19	31.5	21.4	95	77	8	10	2.8	☊° p.
20	32	24.2	84	63	7	6	------	
21	30	20.9	93	60	4	5	------	
22	30.7	29.4	92	64	7	5	------	♌° a.
23	31	20	93	61	8	8	------	
24	31	20.6	91	64	8	8	------	
25	30.9	23.5	75	56	8	8	.3	☌° a. ☽° ●° p.
26	30	23.2	91	72	9	9	------	☿° ☌° a. ☌☿° p.
27	31.5	20.5	97	83	4	9	18.8	♌° a. ● d p.
28	30	20.9	96	67	9	8	------	☌° p.
Mean	30.1	22.6	89.5	71.6	7.6	7.5	------	
Total	------	------	------	------	------	------	265.5	

NUEVA CACERES.

[$\phi = 13°\ 37'$ N; $\lambda = 123°\ 11'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	25	21.6	97	95	10	10	23.7	●° a. p.
2	25.2	20.6	95	83	10	10	13.2	●° a. p. ☽ p.
3	26.7	21	96	83	10	10	4	●° a. p.
4	27.9	21.5	97	90	10	9	3	●° a. p.
5	28.9	21.8	97	90	9	10	5.6	●° p.
6	29.7	21.4	97	79	8	8	6.1	●° p.
7	30.7	20.6	99	74	6	8	.5	● p.
8	30.2	22.6	98	73	10	9	------	☌ a.
9	29.1	23.3	97	94	8	10	14.3	● p.
10	30.8	22.3	98	72	7	5	------	
11	30.6	23	97	92	8	9	30.8	●² d ⊤° p.
12	26.5	21.8	98	82	9	9	21	
13	27.7	21.4	98	78	10	10	.8	●° a. d a. p.
14	29.6	22	98	77	9	9	------	
15	32	21.3	98	55	5	8	------	
16	32.5	20.9	96	54	7	6	------	
17	32.5	21	98	61	6	8	------	
18	31	21.5	98	65	9	8	------	☰² a.
19	32.8	18.7	98	68	9	9	------	
20	32.5	21.2	98	86	8	9	11	● p.
21	30.6	19.3	98	64	3	5	------	
22	31.5	16.9	98	52	6	6	------	
23	30.5	17.4	98	55	5	6	------	
24	30.5	16.5	98	62	8	8	------	
25	32.2	19.9	95	60	5	7	------	
26	31.9	18.7	98	63	6	8	------	
27	31.4	19	98	59	5	7	------	
28	31.8	19	98	65	9	10	------	
Mean	30.1	20.6	97.5	72.5	7.7	8.2	------	
Total	------	------	------	------	------	------	134	

METEOROLOGICAL DATA, ETC.—Continued.

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28	20.6	88	64	9	9	------	
2	27.8	21.6	74	60	7	7	------	
3	29.8	20.1	73	61	9	7	------	
4	31.3	19.8	93	68	6	7	.3	d° p.
5	30.9	20.1	96	64	3	9	------	
6	33.7	20.3	96	55	4	6	------	
7	32.7	21.2	93	56	5	6	------	
8	32.8	21	93	61	5	6	------	
9	33.5	20.9	95	71	6	6	------	
10	32.6	22.5	95	66	7	6	------	
11	30.5	21.1	93	65	7	9	.8	d ◠ p.
12	30.3	20.2	89	61	9	9	------	
13	31.8	19.4	95	58	8	6	------	
14	32.9	20.9	93	59	9	6	------	
15	31.8	21	94	61	5	7	------	
16	33.4	20.6	96	47	1	5	------	
17	33.6	20.4	95	50	1	4	------	
18	35	21.3	93	46	5	4	------	
19	34.6	21.6	92	47	5	6	------	
20	34.5	21.9	95	51	5	6	------	
21	33.3	22.2	93	48	4	6	------	
22	33.4	19.3	92	52	3	4	------	
23	32.1	18.4	93	56	3	7	------	
24	33.3	19.1	95	40	6	5	------	
25	33.8	19.4	89	46	3	4	------	
26	34.2	19.8	84	49	4	5	------	
27	33.2	21	88	56	9	5	------	
28	34	20.4	91	48	4	7	------	
Mean	32.5	20.6	91.3	55.9	5.4	6.2	------	
Total	------	------	------	------	------	------	1.1	

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	19.6	98	61	2	7	------	
2	29.5	19.2	97	62	7	7	------	
3	29.8	19.9	97	62	5	8	.8	☌ ≡ a. d p.
4	29.9	20.2	98	62	2	2	------	
5	30.6	20.3	98	60	7	9	------	☌ ≡ a. d p.
6	30.3	20.2	98	60	8	7	------	☌ ≡ a.
7	30.5	20.5	98	60	5	2	------	
8	30.5	20.5	98	59	6	9	------	☌ ≡ a. d p.
9	30.1	20.3	98	61	10	7	------	d a.
10	30.8	20.7	98	60	7	5	7.9	
11	31	20.9	98	59	10	9	2.3	●° a. p.
12	30.9	21	97	60	7	8	------	
13	31.1	21	98	60	3	7	1.5	●° p.
14	30.6	20.6	97	61	8	9	------	
15	31	20.7	98	60	5	6	------	
16	30.3	20.6	98	60	2	2	------	☌ ≡ a.
17	30.7	20.4	98	60	7	8	------	d p.
18	30.5	20	97	59	5	8	1.6	☌ ≡ a.
19	30.3	20.2	97	60	10	8	5	● a.
20	30.8	20.2	98	60	7	8	------	☌ ☌ ≡ a.
21	30.6	20	98	58	9	7	------	☌ ≡ a.
22	30.9	20	98	60	5	5	------	
23	31	20	98	60	10	6	------	
24	30.5	19.9	98	58	5	6	------	☌ ≡ a.
25	30.9	19.8	98	60	3	2	------	
26	31.3	20	98	60	3	3	------	
27	30.7	19.8	98	60	7	8	------	☌ ☌ ≡ a.
28	30.4	19.6	98	59	6	7	------	☌ ≡ a.
Mean	30.6	20.2	97.8	60	6.1	6.4	------	
Total	------	------	------	------	------	------	19.1	

SAN ANTONIO.

[ϕ=14° 22′ N; λ=121° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	24.8	17.3	91	92	9	7	------	
2	24.5	17.4	93	83	7	6	2	p p.
3	25.3	------	92	95	9	8	12.7	p p.
4	24.3	17.5	95	90	8	7	20.5	◠ a. p p.
5	26	------	95	97	9	6	15.5	◠ p a. ● p.
6	26.4	------	96	81	8	6	4.3	◠ a. p p.
7	28.2	19.2	89	83	8	6	------	◠ a.
8	30	19.8	95	73	7	6	------	
9	27.5	20.8	80	81	9	9	7.9	◠ a. ● p.
10	28.4	19.2	92	78	9	6	5.8	
11	25.3	19.7	92	90	8	8	5.9	p a. p.
12	24.2	17.6	94	95	7	6	3.8	◠ a.
13	28	18.6	99	80	8	6	1.8	● a.
14	29.2	19.7	97	76	7	6	------	
15	30.7	19.7	97	73	10	6	------	
16	29.8	20.2	97	68	7	6	------	
17	31.9	20.2	96	68	9	6	------	
18	28	20	96	87	6	7	4.6	◠ p.
19	28.3	20.3	97	82	8	6	1.8	● a.
20	28	20.1	95	75	8	6	------	
21	28	20.1	97	79	8	6	------	
22	27.8	18.2	96	88	6	5	------	
23	29.3	------	98	64	8	6	------	
24	28	------	88	66	8	6	------	
25	28.2	19.5	89	67	9	6	------	
26	29.5	19.4	93	73	7	8	------	
27	31	20	97	62	9	9	------	
28	30.1	20.4	96	72	7	4	------	
Mean	27.9	19.3	94	79.2	8	6.4	------	
Total	------	------	------	------	------	------	86.6	

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m	Relative humidity. 2 p. m	Cloudiness. 6 a. m	Cloudiness. 2 p. m	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	20.9	77	47	4	3	------	
2	31.2	20.8	66	54	4	4	------	
3	31.1	19.6	72	52	8	9	------	☌ a.
4	32.9	19.3	88	45	9	9	------	☌ a.
5	32.6	20.5	88	50	9	7	------	☌ a.
6	33.7	20.8	91	46	9	5	------	☌ a.
7	32.6	21.4	92	57	3	9	------	☌ a.
8	34	19.5	94	------	2	10	------	☌ ≡ a.
9	34.3	22.3	92	51	9	8	------	☌ a. d° p.
10	32.2	21.9	91	54	10	6	1	d p.
11	31.3	22	91	63	10	10	------	☌ a.
12	32.3	21.6	82	49	10	9	------	☌ a. d° p.
13	32.1	19.6	94	54	10	9	------	☌ a. d° p.
14	33.2	21.1	91	58	9	9	------	
15	33.7	23	90	57	10	8	------	☌ a.
16	35.2	21.8	93	50	4	3	------	☌ a. ⊤ p.
17	37.8	22.7	95	40	8	3	------	☌ a. ⊤ p.
18	36.8	23.2	95	38	5	10	------	☌ a.
19	34.5	22	96	59	8	10	------	☌ a.
20	34.2	21.2	95	48	9	8	------	☌ a.
21	32.3	20.8	95	59	10	9	------	☌ a.
22	34.2	19.2	90	54	10	4	------	☌ a.
23	34.6	19.3	90	41	7	2	------	☌ a.
24	34.4	19.8	92	43	4	5	------	☌ a.
25	33.6	19	90	44	3	3	------	☌ a.
26	35.4	16.5	96	39	3	2	------	
27	35.7	19.6	96	42	3	2	------	☌ a.
28	35.5	20.7	89	41	3	3	------	☌ a.
Mean	33.7	20.7	89.7	49.4	6.9	6.4	------	
Total	------	------	------	------	------	------	1	

METEOROLOGICAL DATA, ETC.—Continued.

BALER.

[ϕ=15° 40′ N; λ=121° 34′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	21	74	80	10	10	------	☉° a.
2	------	21	66	70	10	10	------	☉° a.
3	------	20.8	72	70	10	10	------	☉° a.
4	------	20.9	75	67	10	10	------	⊕ a. ⊤ p.
5	------	22.4	78	81	10	10	3.8	●° a
6	------	22.8	83	89	10	10	5.8	☿° a. ☉°
7	------	23	90	84	10	10	4.1	☉° ⊕ a. ☿ p.
8	------	22.5	96	81	10	10	1	⊕ a. ⊤ p.
9	------	23.5	95	81	10	10	3	
10	------	22.2	93	82	10	10	------	● a.
11	------	23.6	83	77	10	10	1.1	☉° a.
12	------	21.8	79	77	10	10	5.9	☉° a. ☿ p.
13	------	21.5	97	93	10	10	33.1	☿ a. ☿.
14	------	22.4	97	86	10	10	40.4	☉° ⊕ a.
15	------	22.2	97	83	10	9	------	● a. ☉° ⊕ p.
16	------	22.7	97	83	10	9	------	⊤ a. ⊕ p.
17	------	22.3	87	74	10	9	------	☇ a.
18	------	23.6	93	82	10	10	.3	☉° a.
19	------	24	86	86	10	10	11.2	☉° a.
20	------	22.8	96	90	10	10	14.3	☉° a. ☿. ☇ ♁ p.
21	------	22	91	87	10	10	2.5	⊕ a. ☐ ☿ p.
22	------	21.4	95	77	10	9	.3	● ⊕ ⊤ a.
23	------	21.4	86	75	10	2	------	⊕ a.
24	------	------	95	73	10	10	2.5	⊕ a. ☿ ⊤ p.
25	------	20.9	87	75	10	2	------	⊕ a. ♁ p.
26	------	18.5	92	66	10	9	------	⊕ a. ⊤ a. ☿. ♁ p.
27	------	19.6	94	73	10	10	1.3	♁ p.
28	------	19.5	94	56	10	10	------	⊕ a.
Mean	------	21.9	88.1	78.5	10	9.2	------	
Total	------	------	------	------	------	------	130.6	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.1	19	92	65	5	3	------	☊° a.
2	29	19.4	92	60	5	3	------	☊° a.
3	28.2	18	90	65	6	3	------	☊° a.
4	29.2	18.5	92	67	2	1	------	☊² ☰² a.
5	28.9	19.5	91	82	10	8	------	☊ a.
6	30.2	19.3	75	60	3	8	------	☊² a.
7	31.1	21	94	65	2	3	------	☊² a.
8	30.5	21.3	89	72	5	2	------	☊° a.
9	31.4	20.5	96	66	2	2	------	☊² a.
10	30.6	21	83	71	4	3	------	☊° a.
11	30.4	21	91	70	9	5	30.5	●² p.
12	29	21.8	88	64	10	7	------	
13	29.9	22.4	93	66	6	6	------	☊° a.
14	30.4	22	98	70	10	7	------	
15	31.2	22.6	95	65	3	2	------	☊² a.
16	31.4	21.8	95	66	2	1	------	☊² ☰ a.
17	30.3	21.4	93	71	2	2	------	☊² ☰² a.
18	30.2	20.4	93	67	2	1	------	☊² a.
19	31.4	22	94	62	4	2	------	
20	31.8	21.3	95	59	5	3	------	☊° a.
21	30.7	21	94	65	2	3	------	☊² a. ☿ p.
22	32	21.9	83	54	10	2	------	
23	30.4	18.8	91	66	2	3	------	☊² a.
24	31.3	20.1	88	70	2	3	------	☊² ☰° a.
25	31.6	20.6	82	55	2	1	------	☊ a.
26	30.6	18.8	89	60	2	1	------	☊² a.
27	33	20.4	95	57	3	1	------	☊² a.
28	31.7	20.6	90	48	3	3	------	
Mean	30.6	20.6	90.8	64.6	4.4	3.2	------	
Total	------	------	------	------	------	------	30.5	

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	24.5	16.8	98	81	10	10	0.3	☽ a.
2	24.2	17.4	91	73	10	10	1.5	☽² a. ☽° p.
3	24.6	17	99	85	10	9	2.1	☽ ◠² a. ☽² p.
4	28.5	17.9	98	64	10	9	.5	
5	26.3	19.4	96	74	10	10	1	☽° a. p.
6	27.2	19.3	97	85	10	10	2.1	☽ a.
7	31.3	20.7	98	61	10	9	------	☽ a. ☿. ⊕ p.
8	33.2	17.9	97	54	5	4	6.9	☊² ≡ ◯ a. ☽² p.
9	27.5	19.9	98	73	10	9	.8	☽² a. ☽° p.
10	28.9	20.1	97	68	10	10	.3	☽° p.
11	25.3	19.7	95	77	10	10	.5	☽° a. p.
12	26.6	18.3	99	67	10	10	.5	☽° a. p.
13	27.2	19.4	95	72	10	10	2.1	☽ a. p.
14	29.5	20	97	72	10	9	32.8	☽° a. ☽² p.
15	30.8	20.6	100	74	10	7	1.8	☽² ≡ a. ◠° ☽° ♁°
16	31.7	19.1	97	59	4	4	.3	☐ ☽° p.
17	31.1	20.9	93	58	9	4	------	⊤° ☐ ♁° p.
18	30.2	22	96	64	10	5	------	
19	30	21	92	55	10	4	------	
20	30.3	20.5	96	54	10	6	------	☇° p.
21	29.3	20.4	95	68	10	10	------	♁° p.
22	30.4	20	96	52	10	3	------	
23	31	19.1	93	56	7	4	------	☇° p.
24	30	21.6	95	57	10	10	------	♁° p.
25	31	20.2	95	52	4	4	------	☊² a.
26	30.6	16.2	94	48	2	1	------	☊² a.
27	31.1	17.7	95	48	4	1	------	☊² ≡ a.
28	31.9	18.6	93	47	10	6	------	☊² a.
Mean	29.1	19.3	95.9	64.2	8.8	7.1	------	
Total	------	------	------	------	------	------	53.5	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.8	21.5	62	42	5	4	------	
2	30.4	21.6	57	46	9	4	------	
3	29	20.5	66	53	8	4	------	☊ a.
4	28.9	20.5	68	58	3	4	------	☊ a.
5	29.2	21	73	58	9	9	------	☊ a.
6	29.2	21.9	75	60	5	8	------	☊ a. ◯ p.
7	30.4	20.9	78	67	0	4	------	☊² ≡ a.
8	29.6	24.5	79	68	8	4	------	☊ a.
9	30.2	21.2	80	67	0	1	------	☊² ≡ a.
10	29.7	21.1	79	64	9	8	------	☊ a.
11	29.7	23	71	60	4	7	3.8	☊ a.
12	27.8	23	77	63	10	9	------	● a. ☽ a. p.
13	28.7	23.6	76	62	9	9	------	♁ p.
14	29.1	24.5	81	58	10	9	------	☽ p.
15	30.7	24	80	63	8	2	------	☊² ≡ a.
16	30.3	25.5	78	59	8	1	------	☊ a.
17	29.7	22.5	79	58	0	0	------	☊² ☰ a.
18	30.2	21.8	77	58	0	0	------	☊² ☰ a.
19	31	22.6	76	59	3	2	------	☊² ☰ a.
20	30.1	22.5	78	61	5	4	------	☊² ☰ a. ♁ p.
21	29.8	21.7	78	65	6	2	------	☊² ☰ a.
22	30.6	24.2	78	59	8	2	------	☊ a.
23	29.6	21.5	75	60	0	4	------	☊² ☰ a.
24	30.2	23.2	79	64	5	2	------	☊² ☰ a.
25	30.2	22.9	78	60	1	2	------	☊² ☰ a.
26	30.5	23.4	75	63	7	4	------	☊ a.
27	30.5	21.9	80	58	2	4	------	☊² ☰ a. ♁ p.
28	30	22.5	74	64	1	2	------	☊² ☰ a. ♁ p.
Mean	29.8	22.5	75.2	60	5.1	4.1	------	
Total	------	------	------	------	------	------	3.8	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.9	16.3	89	45	2	3	------	≡² a.
2	29.8	17.6	81	38	1	3	------	≡ a.
3	31.1	17.3	85	38	3	4	------	≡² a.
4	32.2	16.9	85	47	2	2	------	≡ a.
5	32.3	22.3	67	46	1	2	------	
6	34.4	21.7	77	44	1	3	------	≡° a.
7	32.3	21	87	48	1	1	------	≡° a.
8	30.1	22.9	86	69	3	6	------	≡° a.
9	36	18.9	93	41	3	0	------	
10	32.1	21.3	83	51	9	3	------	
11	33.8	19.5	90	36	0	2	------	≡° a.
12	30.6	20.5	81	57	7	10	------	≡° a. d p.
13	30.9	22.3	86	61	10	10	------	
14	31.3	22.8	88	59	10	4	------	⊕° p.
15	31.8	21.5	87	65	10	2	------	
16	31.9	22.9	93	55	8	1	------	Ω° a.
17	30.1	21.3	95	62	0	1	------	Ω ≡ a.
18	32.3	20.1	94	51	0	1	------	Ω ≡ a.
19	31.8	19.1	90	58	0	1	------	Ω ≡ a.
20	32.8	19.3	89	53	0	1	------	Ω ≡ a.
21	32.6	19.8	91	55	0	1	------	Ω ≡° a.
22	32.3	21	93	56	1	1	------	Ω ≡ a.
23	31.3	21.9	89	61	9	2	------	d a.
24	31.6	20	92	57	8	2	------	Ω° ≡ a.
25	31.5	21.5	93	63	2	3	------	Ω ≡ a.
26	30.8	20.7	95	62	6	1	------	Ω ≡ a.
27	32.4	20.3	90	53	0	0	------	Ω ≡ a.
28	32.9	20.8	94	63	0	1	------	Ω² ≡ a.
Mean	31.9	20.4	88	53.4	3.5	2.5	------	
Total	------	------	------	------	------	------	------	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	22.7	17.6	84	63	10	9	4.8	●° a. ● p.
2	21.2	17.5	81	70	10	9	2.8	◠ ●° a. d° p.
3	23.8	19.7	68	59	10	7	5.6	● p.
4	23	19.5	77	72	10	10	29	◠°a. ●°a. p. ✓°
5	20.5	18	83	86	10	10	16.2	✓°a. d a. p. ●p.
6	22.7	18.8	84	78	10	10	11.2	d° a. ● p.
7	24.2	20.1	89	91	10	10	4.6	d² a. d p.
8	26.9	22.4	94	80	8	4	2.6	d a. ● p.
9	23.4	19.8	85	72	10	8	2.1	●° a. p.
10	24.8	19.3	90	73	10	8	3.4	●° a.
11	23.4	19.8	81	70	10	8	2.8	● a. ●° p.
12	21.5	18.5	79	77	10	10	7.2	● a. ●° p.
13	20.8	18.8	88	91	10	10	27.4	●° a. p.
14	22.4	18.7	90	87	10	10	11.9	d a. p. ●° p.
15	24.3	20.2	93	86	10	10	4.8	d a. p.
16	27.1	21.8	91	83	10	7	.1	d p.
17	26.3	22.4	83	76	8	8	1.4	d° p.
18	23	20.3	90	88	10	10	1.8	●° a. d° p.
19	26.1	21.1	84	70	3	3	.3	Ω p.
20	26.6	20.3	89	67	2	3	.9	Ω a.
21	25.8	20.5	80	66	10	2	------	●° a.
22	27.4	21.8	79	75	3	3	------	Ω² p.
23	24.9	21.5	86	80	7	10	.4	◠ a. d° a. p.
24	25.2	20.2	82	71	10	6	------	d° p.
25	26.5	21.9	86	90	8	10	2.4	d a. p.
26	28.1	22.8	88	78	8	7	------	Ω p.
27	28.3	21.9	89	68	3	5	------	d° a. Ω p.
28	28	20.7	90	76	0	2	.5	Ω a. p.
Mean	24.6	20.2	85.1	76.5	8.2	7.5	------	
Total	------	------	------	------	------	------	144.2	

SEISMOLOGICAL BULLETIN FOR FEBRUARY, 1910.

By. Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

4, $10^h\ 34^m$. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction NE–SW; intensity III; duration 8 seconds.

5, $8^h\ 20^m$. **Cotabato** (SW of Mindanao). Earthquake of intensity III, preceded by noises resembling the reports of cannon shots.

7, $23^h\ 41^m\ 8^s$.* **Calapan** (N of Mindoro). Oscillatory earthquake. Direction ESE–WNW; intensity III; duration 10 seconds.

8, $0^h\ 2^m\ 18^s$.* **Catbalogan** (W of Samar). Earthquake of intensity III.

8, $16^h\ 24^m\ 48^s$.* **Northern Luzon.** Earthquake which displayed intensity V in the Province of Ilocos Norte and in the northern portions of the Mountain and Cagayan Provinces, and was perceptible throughout the other provinces of northern Luzon down to parallel 17° north latitude. Its epicenter lay probably within the northern part of the Central Cordillera. In Ilocos Norte a noise was heard 2 seconds before the shocks, which resembled the rumblings of a somewhat distant railway train. The disturbance was registered only by the seismographs of Manila.

9, $7^h\ 20^m\ 30^s$.* **Southeastern Luzon.** Earthquake of intensity IV in the northern part of Camarines Province and on Catanduanes Island. Its origin was in the ocean, some 300 kilometers east-southeast of Manila, not far from the northern coast of Camarines and the northwest coast of Catanduanes Island.

17, $4^h\ 43^m$. **Cotabato** (SW of Mindanao). Oscillatory earthquake. Direction SW–NE; intensity IV; duration 10 seconds. The disturbance was preceded and accompanied by subterranean noises.

21, $8^h\ 20^m$. **Borongan** (E of Samar). Earthquake of intensity III and 3 seconds' duration.

26, $22^h\ 24^m\ 30^s$. **Santo Domingo** (Batanes Islands). Earthquake of intensity III; duration 2 seconds.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight =0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2 a.)	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
			V.	22 10 27	22 14 53	22 18 39	22 19 12	.01	7.6	22 42	
21	4	I_r	H. NNW	22 10 25	22 14 30	22 18 29	22 19 08	.11	7.8	22 41	
			H. WSW	22 10 24	22 14 25	22 18 33	22 19 46	.04	7.2	22 43	
22	6	I_d	V.	22 10 20	----------	22 10 37	22 10 42	.03	2.4	22 13	Vertical Component 0.01 mm.
23	7	I_v	V.	23 41 08	----------	23 41 22	23 41 37	.18	2.4	23 45	V. C. 0.07 mm. Earthquake, III at Calapan (Mindoro I.).
24	8	I_v	V.	0 02 18	----------	0 03 19	0 03 43	.03	2.4	0 07	V. C. 0.01 mm. Earthquake, III at Catbalogan (W of Samar).
25	8	I_d	V.	----------	----------	6 21 33	6 21 35	.04	2.4	6 23	V. C. 0.01 mm.
			V.	16 24 33	----------	16 25 18	16 26 10	1.60	2.4	16 40	V. C. 0.05 mm. Earthquake, IV in northern Luzon.
26	8	II_v	H. NNW	16 24 48	----------	16 25 31	16 26 50	.20	9	16 40	
			H. WSW	16 24 48	----------	16 25 32	16 26 26	.22	8.1	16 40	
27	9	I_v	V.	7 20 30	----------	7 21 16	7 21 18	.06	2.4	7 26	V. C. 0.04 mm. Earthquake, III at Nueva Caceres and Virac.
			V.	16 00 25	----------	16 04 13	16 05 16	.04	2.4	16 16	
28	10	I_v	H. NNW	16 00 26	----------	16 04 03	16 05 00	.03	9.9	16 22	
			H. WSW	16 00 26	----------	16 04 05	16 05 01	.02	5.4	16 20	
29	12	I_d	V.	----------	----------	15 55 36	15 55 38	.04	2.4	15 58	V. C. 0.01 mm.
			V.	2 14 58	2 20 35	2 25 20	2 26 56	.04	9.6	3 20	V. C. 0.01 mm. Earthquake in southeastern part of Japan.
30	13	II_r	H. NNW	2 15 03	2 20 36	2 26 07	2 28 08	.52	10.5	3 21	
			H. WSW	2 15 03	2 20 40	2 25 38	2 27 49	.89	10.5	3 22	
			V.	18 21 01	----------	18 21 38	18 22 15	2.23	2.4	18 54	V. C. 0.68 mm.
31	15	II_v	H. NNW	18 21 03	----------	18 21 39	18 22 59	1.01	10.2	18 50	
			H. WSW	18 21 03	----------	18 21 38	18 23 25	2.47	11.4	18 50	
32	16	I_v	V.	13 37 07	----------	13 37 27	13 37 29	.09	2	13 41	V. C. 0.02 mm.
33	18	I_r	V.	13 21 57	----------	----------	----------	-------	------	13 38	
			V.	16 12 20	----------	----------	----------	-------	------	13 26	
34	22	I_r	H. WSW	16 12 26	----------	----------	----------	-------	------	16 28	
			V.	5 43 13	----------	5 43 28	5 44 07	.40	2.4	5 47	V. C. 0.21 mm.
35	23	I_v	H. NNW	5 43 16	----------	5 43 30	----------	-------	------	5 47	
36	25	I_d	V.	21 17 44	----------	21 18 06	21 18 21	.04	2.4	21 21	V. C. 0.01 mm.
			V.	22 29 44	----------	22 31 16	22 32 14	.22	2.4	23 23	V. C. 0.01 mm.
37	27	II_v	H. NNW	22 29 46	----------	22 31 16	22 34 55	2.44	14.1	23 18	
			H. WSW	22 29 46	----------	22 31 28	22 35 45	2.73	10.8	23 26	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation, NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only four to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

4, 10^h 34^m. **Butúan** (N de Mindanao). Temblor oscilatorio. Dirección NE–SW; intensidad III; duración 8 segundos.

5, 8^h 20^m. **Cotabato** (SW de Mindanao). Temblor de tierra de intensidad III; precedido de ruidos semejantes á cañonazos.

7, 23^h 41^m 8^s.* **Calapan** (N de Mindoro). Temblor oscilatorio. Dirección ESE–WNW; intensidad III; duración 10 segundos.

8, 0^h 2^m 18^s.* **Catbalogan** (W de Samar). Temblor de tierra de intensidad III.

8, 16^h 24^m 48^s.* **N de Luzón.** Temblor de tierra de intensidad V en la Provincia de Ilocos Norte y en la parte Norte de la Provincia Montañosa y de Cagayán. Fué perceptible en las demás provincias del N de Luzón hasta el paralelo 17° Lat. N. El epicentro se hallaba probablemente en la parte N. de la Cordillera Central. En Ilocos Norte precedió al temblor, dos segundos antes, un ruido semejante al de un tren oido de algo lejos. Solamente fué registrado por los seismógrafos de Manila.

9, 7^h 20^m 30^s.* **SE de Luzón.** Temblor de tierra de intensidad IV en la parte N de Camarines y Catanduanes. El epicentro se hallaba en el mar á 300 kilómetros de distancia de Manila al ESE, no lejos de la costa N de Camarines y de la costa NW de la Isla de Catanduanes.

17, 4^h 43^m. **Cotabato** (SW de Mindanao). Temblor oscilatorio. Dirección SW–NE; intensidad IV; duración 10 segundos: precedido y acompañado de ruido subterraneo.

21, 8^h 20^m. **Borongan** (E de Samar). Temblor de tierra de intensidad III, duración 3 segundos.

26, 22^h 24^m 30^s. **Santo Domingo de Basco** (Batanes). Temblor de tierra de intensidad III, duración 2 segundos.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

BULLETIN FOR MARCH, 1910.

METEOROLOGICAL BULLETIN FOR MARCH, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The mean monthly pressure was below the normal mean for this month and differed very slightly from that for March, 1909. Thus for Manila its departure from the normal was —1.01 millimeter and from the mean of the corresponding month of the preceding year —0.22 millimeter. The highest pressures occurred in the majority of our stations on the 26th and the lowest on the 17th and 18th.

The mean monthly temperature was, as a rule, likewise a trifle lower than for March, 1909. For Manila the extremes were 35.0° C., registered on the 27th and 29th, and 18.6°, corresponding to the 2d.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR MARCH, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from March, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from March, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	758.11	—0.35?	759.97	10	756.04	17	26.8	+0.1	33.8	24	20.5	5
Surigao	58.86	+ .04	60.75	26	56.32	16	25.8	— .2	31.5	17	19.8	6
Cebu	58.80	— .17	60.89	26	56.05	17	26.4	— .1	31	19	21.8	6
Iloilo	58.98	+ .15	60.76	10	56.79	17	26.6	— .2	33.4	24	21.8	6
Ormoc	58.99	+ .14	60.98	26	56.39	17	25.1	— .3	32.5	27	17.9	1
Tacloban	59.32	— .02	61.53	26	55.64	17	25.9	— .4	31.8	3,27	21.9	5
Calbayog	59.50	— .13	61.69	26	54.72	17	25.2	— .3	33.6	29	20.3	1
Legaspi	59.44	— .32	61.79	26	58.31	17	26.3	— .4	31.7	1	20.8	3
Atimonan	59.68	— .28	61.91	26	56.21	18	26.4	— .5	32.7	19	21	11
Manila	59.51	— .22	61.57	10	56.51	18	26.2	+ .1	35	27,29	18.6	2
San Isidro	59.48	— .20	61.58	26	56.21	18	26.4	+ .2	35	23	18.4	2
Dagupan	59.29	— .21	61.30	26	56.08	18	26.8	— .5	36.6	31	19.5	2
Bolinao	59.06[3]				56.05[3]	18	26.5[3]					
Baguio[2]	636.89		638.89	26	634.14	18	17.6		26.6	2	13.4	14
Vigan	759.44	— .28	761.44	26	756.31	18	26.8	— .8	34.5	17	19.3	4
Tuguegarao	60.27	— .14	62.38	11	56.94	18	26	— .4	36	21	18.6	7
Aparri	60.73	— .21	63.04	10,11	57.22	19	24.8	— .6	31.9	22	18.6	16

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.
[3] From twenty days only.

Precipitation.—The greater part of our stations throughout the Islands report an amount of rainfall exceeding that during March of last year, as may be seen in the following table. As regards Manila the total rainfall differed from the normal for March by —3.0 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF MARCH, 1910.

Station.	Total.	Departure from March, 1909.	Rainy days.	Departure from March, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from March, 1909.	Rainy days.	Departure from March, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	80.7?	+ 45.4	10	+1	29.5	31	Sumay, Guam	380.3	+310	15	− 2	165.1	15
Isabela, Basilan	130	+104.6	11	+6	35.8	23	Calapan	194.3	+132.6	17	+ 3	42.2	31
Zamboanga	25.1	− 19.1	3	−4	16.3	25	Virac	244.7	+ 59.8	24	+ 3	76.8	16
Davao	173.2	-------	9	------	37.6	30	Nueva Caceres	146.3	-------	11	------	63.4	17
Cotabato	37.5	− 36.5	7	−3	13	25	Batangas	6.9	− 4.9	4	− 5	4.3	5
Cagayan, Misamis	38.1	−105.1	6	−4	24.1	21	Atimonan	53.1	−124.1	10	− 5	15.3	5
Butuan	123.2	+ 13	22	+7	18.5	15	Silang	41.8	− 51	9	+ 3	12.7	13
Yap, W. Carolines	150.1	-------	22	------	35.3	14	San Antonio, Laguna	128	− 76.5	15	− 1	22.9	9
Tagbilaran	94.6	+ 28	10	− 3	27.1	9	Manila	16	− 43.3	5	− 4	8	4
Surigao	245.7	+ 98.2	18	−3	50.8	20	Iba	115.9	-------	8	------	53.3	11
Maasin	84.5	−135.5	7	−1	31.5	31	San Isidro	38.6	+ 32.9	8	+ 4	24.4	23
Cebu	98.5	+ 43.6	13	0	41.7	19	Tarlac	78.8	+ 72.4	7	+ 5	33.5	23
Iloilo	16.5	− 25.1	10	0	6.1	18	Dagupan	109.9	+ 61.1	7	+ 4	63.5	24
San Jose Buenavista	43.3	+ .3	9	+5	13	18	Baguio	129.5	+ 93.7	14	+ 7	20.1	13
Ormoc	82.7	− 12.3	17	+1	20.8	12	San Fernando, Union	38.7	+ 38.7	5	+ 5	21.6	13
Tacloban	218.6	+ 85.9	25	+7	39.6	12	Echagüe	86.2	+ 49.9	12	+ 3	30.7	10
Borongan	384.6	+146.2	27	+3	47.8	11	Candon	11.9	+ 1.5	2	0	10.9	20
Calbayog	345.2	+160.9	21	0	89.9	17	Vigan	10.9	0	2	0	6.3	19
Masbate	145.2	+ 67.3	18	0	51.3	17	Tuguegarao	70.2	+ 19.1	6	− 1	27	23
Romblon	194.3	+113.6	21	+7	57.2	17	Laoag	8.1	+ 8.1	2	+ 2	4.8	24
Laoang	488.4	+249.8	25	+1	276.6	16	Aparri	70.4	+ 17.3	11	− 4	24	18
Gubat	249.1	−154.4	21	−1	109.2	17	Sto. Domingo, Batanes Is	159	− 70.4	20	+ 2	72.1	9
Legaspi	348.8	+141.7	19	−3	104.6	17							

DEPRESSIONS AND TYPHOONS.

One typhoon only has been observed during this month in the Far East. It was formed apparently in the neighborhood of the Western Carolines, and moved to WNW, until, on nearing the Islands of Samar and Catanduanes, it inclined extraordinarily northward during the 16th and 17th. On the 18th and 19th it moved almost due north, and on the 20th it recurved eastward near the Meiacosima group of islands. On the 22d a depression of little importance could still be distinguished near and to the south of the Bonin Islands, between 25° and 26° latitude north. The track of this typhoon, as just briefly described, is given in Plate I.

The bad weather observed in Yap from the afternoon of the 12th to the 15th, inclusive, the gusty winds from the northeast and southeast quadrants that blew there during these days, and a slight fall of the barometer of that station with a minimum registered at 12.30 p. m. of the 13th seem to be sufficient signs of the origin and formation of this typhoon in the neighborhood of the Western Carolines to SSE of Yap, and of its passing south of this station on the morning of the 13th.

The Manila Observatory, however, did not announce the existence of this typhoon until the 16th, when the following typhoon warnings were cabled to Tokio, Shanghai, Taihoku, Hongkong, and Phulien:

March 16, 10 a. m.: Typhoon E of the Visayan Islands; direction unknown.
March 16, 6 p. m.: Typhoon E of the northern Visayas or southeastern Luzon, moving NNW.

On the 17th and 18th these cablegrams were sent:

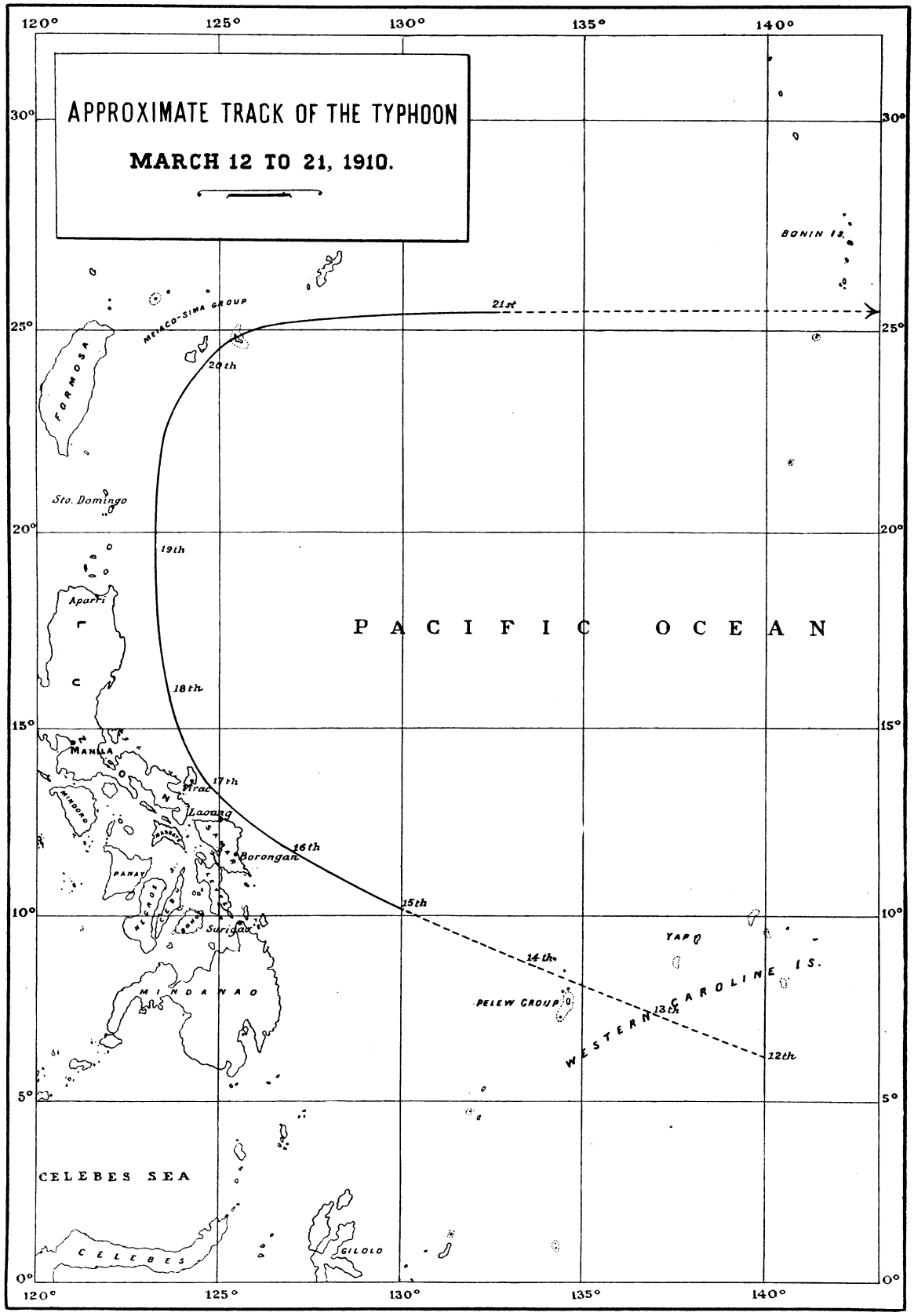
March 17, 9.30 a. m.: Typhoon E of southern Luzon, moving NW or NNW.
March 18, 9.15 a. m.: Typhoon E of Luzon, less than 300 miles distant, moving N or NNE.

Hongkong Observatory, on its part, favored us with the following warnings:

March 17, noon: Typhoon SE of Luzon, moving NW.
March 18, 11.45 a. m.: Typhoon E of Luzon, moving N.

In the following table our readers will find some of the barometric minima registered during this typhoon in the stations of the Weather Bureau, together with the winds observed at the time of the minimum.

Plate I.


APPROXIMATE TRACK OF THE TYPHOON
MARCH 12 TO 21, 1910.
120°
125°
130°
135°
140°
30°
25°
20°
15°
10°
5°
0°
BONIN IS.
21st
MEIACO-SIMA GROUP
20th
FORMOSA
Sto. Domingo
19th
Aparri
PACIFIC OCEAN
18th
MANILA
17th
Virac
Laoang
16th
Borongan
PANAY
Surigao
15th
YAP Q
14th
CAROLINE IS.
PELEW GROUP
13th
WESTERN
12th
MINDANAO
CELEBES SEA
CELEBES
GILOLO

Station.	Barometric minimum.	Day and hour of the minimum.	Winds observed at the time of the minimum.
	mm.		
Surigao	754.6	16, 17, 3 p. m.	W
Borongan	752.7	17, 2 a. m.	?
Laoang	751.7	17, 4 a. m.	SW
Virac	749.43	17, 2 p. m.	ESE[1]
Aparri	756.0	19, 4 p. m.	NW
Santo Domingo	753.6	19, 4 p. m.	NNE–N

[1] This wind was due to a local thunderstorm.

At the time when the typhoon reached Meiacosima it seems to have had decreased in intensity as compared with the state of development shown on the 17th, at the time of the shortest distance of the disturbance from Catanduanes Island.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La presión atmosférica media mensual es inferior á la normal de este mes, aunque difiere muy poco de la de Marzo de 1909. Así la de Manila se diferencia de la normal en —1.01 milímetro y de la media del año pasado en —0.22 milímetro. Las máximas presiones tuvieron lugar en la mayoría de nuestras estaciones el día 26 y las mínimas los días 17 y 18.

La temperatura media mensual resulta en general ligeramente inferior á la de Marzo, 1909. Los valores extremos de Manila fueron 35.0° C. registrado los días 27 y 29, y 18.6° C. correspondiente al día 2.

Precipitación acuosa.—La cantidad de agua recogida en las estaciones de Filipinas ha sido para la mayoría de nuestras estaciones mayor que la de Marzo del año próximo pasado, según puede verse en la tabla que acompaña el texto inglés. La lluvia total caída en Manila se diferencia de la normal de Marzo en —3.0 milímetros.

DEPRESIONES Y TIFONES.

Sólo un tifón se ha observado este mes en el Extremo Oriente. Formado, según parece, el día 12 en los alrededores de las Carolinas Occidentales, se dirigió al principio al WNW hasta que al llegar cerca de las islas Sámar y Catanduanes se inclinó extraordinariamente hacia el N; y el 20 verificó una completa recurva al E cuando se hallaba ya en los alrededores del grupo de Meiacosima. El día 22 todavía se le distingue en forma de una depresión de poca importancia cerca de las islas Bonin, entre los paralelos 25° y 26°. Véase en la lámina I esta trayectoria, tal como la acabamos de describir.

El mal tiempo observado en Yap desde la tarde del 12 hasta el 15 inclusive, los vientos racheados del 1.° y 2.° cuadrantes que soplaron en dichos días, y la ligera bajada del barómetro con su mínima registrada á las 12.30 p. m. del 13, son indicios bastantes para suponer el origen de este baguio en los alrededores de las Carolinas Occidentales hacia el SSE de Yap, y su paso por el sur de esta estación la mañana del 13.

El Observatorio, sin embargo, no anunció la existencia de este baguio hasta el día 16 en que se trasmitieron á Tokio, Shanghai, Taihoku, Hongkong y Phulién estos avisos de tifón:

Día 16, 10 a. m.: Tifón al E de las Islas Visayas; dirección desconocida.

Día 16, 6 p. m.: Tifón al E de las Visayas septentrionales ó de la parte sudeste de Luzón, moviéndose al NNW.

Los días 17 y 18 se enviaron además estos dos cablegramas:

Día 17, 9.30 a. m.: Tifón al E de la parte sur de Luzón, moviéndose al NW ó NNW.

Día 18, 9.15 a. m.: Tifón al E de Luzón, distancia menor de 300 millas, moviéndose al N ó NNE.

Por su parte el Observatorio de Hongkong nos favoreció con estos telegramas:

Día 17, mediodía: Tifón al SE de Luzón, moviéndose al NW.

Día 18, 11.45 a. m.: Tifón al E de Luzón, moviéndose al N.

En el siguiente cuadro damos las mínimas barométricas de varias estaciones de Filipinas juntamente con los vientos observados al tiempo de la mínima.

Estación.	Mínima barométrica.	Día y hora de la mínima.	Vientos observados al tiempo de la mínima.
	mm.		
Surigao	754. 6	16, 17, 3 p. m.	W
Borongan	752. 7	17, 2 a. m.	?
Laoang	751. 7	17, 4 a. m.	SW
Virac	749. 43	17, 2 p. m.	ESE [1]
Aparri	756. 0	19, 4 p. m.	NW
Santo Domingo	753. 6	19, 4 p. m.	NNE–N

[1] Este viento fué debido á turbonada local.

Cuando el tifón llegó á Meiacosima, parece había disminuído mucho en intensidad, si se compara con el desarrollo que había manifestado el 17 al pasar cerca de la Isla Catanduanes.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Maximum.	Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Shelter, total.
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	758.67	25.4	32.5	20.4	26.1	28.7	27.3	27.8	27.2	27.3	67.5	15.7	7.4	5.3
2	57.77	25.2	32.1	18.6	26.2	27.8	27.3	27.6	27.3	27.3	70.1	16.7	6.5	4.6
3	57.95	27.4	32.3	23.1	26.9	29.1	27.4	27.8	27.3	27.3	72.1	19.5	6.2	4.1
4	58.69	26.4	32.5	22.6	27.6	29.4	27.8	29	27.3	27.3	78.8	19.9	3.8	2.8
5	59.04	26.5	31.6	22.1	27.3	29.2	27.9	28	27.3	27.3	79.2	20.2	4.7	3.1
6	59.78	26.2	32.7	23.3	27.7	29.2	28	28.4	27.3	27.2	78.1	19.6	3	2.7
7	59.65	25.4	31.5	21	26.9	28.3	28	28.9	27.3	27.3	75.2	17.8	4	3
8	60.09	25.1	31	19.9	26.2	28.2	27.6	27.8	27.3	27.3	71.8	16.8	4.7	3.6
9	60.81	25.8	31.7	21	26.7	27.8	27.5	27.7	27.3	27.3	71.8	17.4	5.5	4.1
10	61.57	25.8	31.6	21.5	26.4	28.2	27.3	27.5	27.3	27.3	74.5	18.2	5	3.7
11	61.49	25.9	30.3	22.5	26.8	28.2	27.5	27.7	27.4	27.4	74.7	18.4	4.2	3.3
12	60.90	25.8	31.2	22.4	26.5	28.8	27.4	27.8	27.3	27.3	78.1	19.2	3.6	2.9
13	60.76	25.4	30.2	21.2	26.5	27.9	27.3	27.6	27.3	27.3	74.8	17.8	4.4	3.6
14	61.18	25.2	31.5	20.7	26.3	27.7	27.2	27.5	27.3	27.3	69.3	16.2	6	4.4
15	60.74	24.7	31	20.3	26	27.2	27.1	27.3	27.4	27.3	71.4	16.3	5.1	3.9
16	58.87	24.9	30.4	20.1	26	27.4	27.1	27.4	27.3	27.3	70.6	16.2	4.5	3.5
17	57.10	25.9	29.8	22.4	26.2	27.8	27.1	27.4	27.3	27.3	70.5	17.4	4.7	3.7
18	56.51	26.2	31.2	22.1	26.7	28.4	27.3	27.6	27.4	27.4	79.2	19.9	3.8	2.8
19	57.39	26.4	30.8	23	27	28.2	27.4	27.7	27.5	27.5	81.8	20.7	3.4	2.6
20	58.94	26.3	32.4	21.7	26.8	28.5	27.4	27.7	27.3	27.3	81.1	20.5	3.6	2.5
21	59.25	27	34.5	22	27.3	30	27.7	28.1	27.6	27.3	78.4	20.3	4.2	3.3
22	59.19	27.1	32.8	23.2	27.9	29.7	28	28.4	27.5	27.5	75.8	19.9	4.8	3.7
23	59.14	26.3	33	22.8	28.2	29.8	28.4	28.7	27.5	27.5	78.8	19.8	3.8	2.9
24	60.09	26.7	34	21.9	27.8	30	28.3	28.6	27.5	27.5	78.5	20.1	4.8	3.5
25	61.25	27.6	33.8	22.3	28	29.9	28.5	28.8	27.6	27.4	67.5	18.2	6.9	5.2
26	61.41	27.8	34.7	22.8	28	30.2	28.5	28.7	27.5	27.5	63	17.1	7.5	5.5
27	60.33	27.5	35	22.7	28	30.4	28.6	28.8	27.7	27.2	61.9	16.3	7.8	5.6
28	59.75	26.4	34.2	20.4	28	29.7	28.6	28.8	27.6	27.5	67.5	16.9	6.3	4.7
29	59.30	26.8	35	21	27.9	29.4	28.5	28.6	27.7	27.5	69.7	17.8	6.9	5.5
30	58.81	26.8	33.1	22.2	27.9	29.2	28.3	28.8	27.6	27.5	73.2	19	4.7	3.8
31	58.38	27.2	34.4	21.7	28	29.8	28.6	28.8	27.8	27.6	70.4	18.4	6.3	4.6
Mean	759.51	26.2	32.3	21.7	27.1	28.8	27.8	28.1	27.4	27.4	73.4	18.3	5.1	3.8
Total													158.1	118.5
Departure from normal	—1.01	—0.5	0.0	+0.3							+1.6	0.0		

Date.	Wind. Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Prevailing form and its direction. Upper.		Lower.		Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0–10.*					*h. m.*	*mm.*	
1	SE quad.	249.5	30	SE	6.8	Ci.		Cu.		8 15		≡° a.
2	E quad.	242	25	SE	3.2	Ci.		Cu.	ESE	9 45		≡° a.
3	Variable	266	25	WNW	3.8	Ci.-Cu.		Cu.	E	9 05		
4	NW quad.	182.5	17	WNW	4.8	A.-Cu.	NE	Cu.	E	6 45	8	≡° a. ● p.
5	NNE, W	178.5	19.5	WSW	3.9	Ci.		Cu.		9 45		≡° a. ⌐◪ p.
6	SE, N	148	11	SE	7.2	A.-Cu.		Cu.	ENE	6 00	5.8	≡ a. p p.
7	SE quad.	132.5	12.5	WSW	6.8	Ci.		Cu.		4 20		≡ a.
8	E, W	161.5	17	W	6.7	Ci.		Cu.	E	5 30		≡ a. ≡° p.
9	ESE	194.5	17.5	ESE	7.2	A.-Cu.	E	Cu.	E	4 45		≡ d° a. d° p.
10	SE	177.5	19	SE	6.8	A.-Cu.	E	Cu.	E	5 50		≡° a. ≤ p.
11	W, SE	167.5	15	W	6.2	A.-Cu.		Cu.	E	4 55		≡ a. d° p.
12	SE quad.	164.5	12.5	SW	6.8	A.-Cu.		Cu.	E	6 10	1.4	≡ a. ● p.
13	E	227	21	E	9	A.-Cu.	EbyS	Fr.-N.		1 40	.5	≡° d° a. ●° p.
14	ESE	246	19	ESE	9.1	Ci.		N.-cf.	E	1 30		≡ a.
15	NE	195.5	23	NE	9.2	Ci.		Cu.	E	2 25		≡ d° a.
16	NE quad.	143	17	NbyE	9.3	Ci.-S.	E	N.-cf.	NE	1 40		≡° a.
17	NNW	220.5	24	N	10	Ci-S.		S.-Cu.	NE	0 00		d° a.
18	SW	264	27	SW	8.7	A.-Cu.	NE	Cu.		3 55		≡° a.
19	SW quad.	161.5	17.5	SW	7.7	A.-Cu.	S	Cu.		2 50		≡° a.
20	SW quad.	146.5	21	WSW	6.3	Ci.-S.	E	Cu.		4 15		≡° a. ⌐ ◠ ●° p.
21	Variable	148	23	N	6.8	Ci.		Cu.	E	6 55	.3	≡° a. d p.
22	SE	166	15	W	8.2	A.-Cu.	SE	Cu.	E	4 30		≡° p° a. ⌐◪° p.
23	NW quad.	198	18	WNW	6.4	Ci.-S.		Cu.	E	7 05		⌐◪ p° ≤ p.
24	W, SE	187.5	18.5	W	5.1	Ci.		Cu.	E	6 15		≡ Ω² a.
25	E	220.5	24	EbyS	5.2	Ci.		Cu.	E	7 15		
26	E, ESE	303.5	24	ESE	5	Ci.-S.		Cu.	E	9 30		
27	E, NE	220.5	20	E	3.2	Ci.		Cu.	ESE	10 10		≡ a.
28	E quad.	204.5	22.5	ENE	4.1	A.-Cu.	E	Cu.	E	6 05		≡° d° a.
29	ENE, E	246	20	E	3.8			Cu.	E	10 10		≡° a.
30	NW quad.	205.5	21.5	NW	6.3	Ci.		Cu.	E	7 05		≡° a. ≤ p.
31	SE	216.5	27.5	ESE	7.2	Ci.-S.	S	Cu.	E	5 50		≡° a. ≤° p.
Mean		199.5	20.1		6.5					5 49		
Total										180 10	16.0	
Departure from normal		—27.2			+ 2.1					—60 07	—3.0	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[$\phi = 9°\ 38'$ N; $\lambda = 123°\ 51'$ E; barometer above sea, 21.8 meters; gravity correction not applied, −1.86 mm.]

Day.	Pressure (mean).	Temperature. Mean.[3]	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).[3]	Wind. Prevailing direction.	Wind. Force (mean).[3]	Clouds. Amount (mean).[3]	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.45	25.5	28.9	21.5	79.4	N quad.	1.4	8	Ci.-S.	Cu.-N. E	------	
2	56.40	26.1	30.5	22.3	84	N quad.	2	7.6	Ci.-S.	Cu.-N. E	5.6	●° p.
3	56.59	27	32.8	22.5	81.4	NW quad.	1.6	8.6	Ci.-S.	Cu.-N. NW, E	------	┬° p
4	57.57	27	32.3	22.5	77.8	N quad.	1.6	7.4	Ci.-S.	Cu. E	------	
5	58.14	26.2	31.3	20.5	80.6	N quad.	1.6	6.8	Ci.-S. SE, E	Cu. Variable	------	
6	58.73	26.3	31.4	21.2	76.5	N quad.	1.6	6.6	Ci.-S.	Cu. SE, N	------	
7	58.06	27.1	30.9	21.6	76.6	NE quad.	1.8	8.2	Ci.-S.	Cu.-N., Cu. NW	------	
8	58.23	26	29.7	23.5	84.3	NE, NNW	1.8	8.8	Ci.-S.	Cu.-N. NE, E	13.2	
9	58.87	25.6	30.5	22.9	85.2	NNW, N	1.8	9	Ci.-S.	Cu.-N. NEquad	27.1	┬ ●² p.
10	59.97	55.9	30.9	22.2	84	WNW	1.4	8.2	Ci.-S.	Cu.-N. E	7.6	● a. p.
11	59.83	26.5	30.1	21.9	77.2	N quad.	1.6	9.2	Ci.-S.	Cu.-N. SE, E	3.8	●° p.
12	59.87	55.8	31.5	22.7	80.2	N, SE	1.6	9	Ci.-S. SE	Cu.-N. E	6.6	d° ┬° ● p.
13	59.94	25.7	29.5	22.3	79.5	N quad.	1.6	10	Ci.-S.	Cu.-N. E	7.6	● p.
14	59.96	26.3	30.2	21.5	75.5	N quad.	1.2	9	Ci.-S.	Cu.-N. E	------	
15	58.40	26	29.4	22.7	80.6	N	1.6	9.6	Ci.-S.	Cu.-N. NE	------	
16	57.05	26.4	30.1	22.7	77.2	N	1.6	10	Ci.-S.	Cu. WNW, NW	------	
17	56.04	26.9	30.7	22.1	76	SSW, SE	3	8.4	Ci.-S. SE	Cu. Variable	------	
18	56.66	27.7	30	24	74.4	SE	1.8	7.6	Ci.-S.	Cu. Variable	------	
19	57.08	27.2	30.3	22	77.1	SE	1.8	8.2	Ci.-S. SE	Cu. SE, SSW	------	┬ ∪ p.
20	58.33	26.4	31.5	22.7	80.9	NNE, SE	1.6	9.4	Ci.-S.	Cu.-N. SE	4.3	d° a. p. ┬ ●° p.
21	58.54	26.7	31.1	22.3	83.2	SW	1.4	9.6	Ci.-S.	Cu.-N. SE	------	┬° ↘ p.
22	57.94	27.3	31.5	23.5	78.9	SE, SW	1.4	8.6	Ci.-S.	Cu.-N. SE, E	------	┬ a.
23	57.80	27.4	30.8	22.8	77	SE	1.2	6.8	Ci.-S.	Cu.-N. E	------	
24	58.49	27.8	33.8	23.4	76.2	SW	2	6.8		Cu. E	------	
25	59.13	28	32.6	23.7	72.8	NNE	2.2	8.2	Ci.-S. SW	Cu. E	------	
26	59.75	26.3	30.9	22.6	76.4	NNE	2	9.8	Ci.-S.	Cu.-N. E	------	d° p.
27	58.37	27.6	32.2	22.9	72.9	NNE	2	7.8	Ci.-S.	Cu.-N. E	------	
28	57.66	27.9	31.8	22.4	71.9	NNE	2.4	7.4	Ci.-S.	Cu.-N. E	------	
29	57.25	28.2	32.5	22.6	72.4	NNE	1.8	7.8	Ci.-S.	Cu.-N. E	------	
30	56.69	27.4	30.3	23.3	77.2	NNE	1.8	8.4	Ci.-S.	Cu.-N. E	17	● ⌐⊿² ≤ d p.
31	56.63	27.6	30.8	23.7	74.1	NNE	1.6	8.8	Ci.-S.	Cu.-N. E	1.8	d ┬° a.
Mean	758.11	26.8	31	22.5	78.1	----------	1.7	8.4	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	94.6	

SURIGAO.

[$\phi = 9°\ 48'$ N; $\lambda = 125°\ 29'$ E; barometer above sea, 6 meters; gravity correction not applied, −1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.02	25.4	30.1	21.7	87.8	Variable	0.7	6.3	Ci.-S. N	Cu. NE	1.3	Ω² a.
2	57.24	24.9	27.3	23.3	92.7	E	.5	8.2	A.-Cu., Ci.-S. N	Fr.-N. ENE	19	● a. p.
3	57.41	26.2	30.6	23.1	90	ENE, NE	.3	5.5	A.-Cu. N	Fr.-Cu. E	------	●° ≡ a. Ω² p.
4	58.71	26.2	30.5	22.8	82.8	NE	.3	3.7	Ci.-S. N	Cu.	------	Ω² a. p.
5	59.03	24.8	30	20.7	85.8	NE, NNE	.3	3.8	Ci.-S., Ci.	N.-cf. NE	2.5	Ω² a. ● p.
6	59.33	24.2	29.5	19.8	84.2	ENE	.2	5	Ci.-S. NE	Cu. E	------	Ω² a.
7	58.63	25.5	30.3	21.2	81	NNW, NE	.3	6.5	Ci.-S. NE	Cu. ENE	2.3	Ω² a. ● p.
8	58.90	24.4	29.9	22	90.7	ESE	.2	7	Ci.,Ci.-S.	N.-cf. NE	26.2	● a. p.
9	59.53	25.4	29.3	22.9	87.7	ENE	.3	8.3	A.-Cu., Ci.-S	N.-cf. E	28.4	≡ a. ● a. p.
10	60.64	26.6	30.2	23.1	80.3	NE quad.	1.2	6	Ci.-S. N	Cu. NE	------	
11	60.55	26	29.8	22.5	81.4	NE quad.	1	7.7	Ci.-S. N	Fr.-Cu. NE	------	Ω² ≡ a.
12	60.42	25.3	30	22	83.6	E	.3	5.7	A.-Cu. N	Cu. E	4.3	Ω² ≡ a.
13	60.42	25.3	28.5	22.3	81.8	NE quad.	1	9.3	Ci.-S.	N.-cf., Cu. NE	3.6	● a.
14	59.92	26.3	30	23.2	75.5	NE	.7	9.5	A.-Cu. N	Cu. NE	1.3	p p.
15	58.56	25	27.4	22.6	86.5	NW	1.2	9.8	Ci.-S.	Fr.-N. E	7.3	● p.
16	56.32	25.3	27.7	23.7	84.2	W quad.	1.8	9	Ci.-S.	S.-Cu. W	1.8	● p.
17	56.44	27	31.5	23.4	72.3	SSW	1.5	4.8	Ci.-S. NE	Cu., Fr.-Cu. SW	-----	
18	57.48	27	31	23	83.3	SW quad.	.8	4.2	Ci.-S. NE	Cu. S	------	Ω² ≡ a.
19	57.97	26.3	30.4	22.9	88.3	SW	.2	5.3	Ci.-S. NE	Cu. SE	------	Ω² ≡ a.
20	59.09	26.1	31.1	23.3	86.7	E, ENE	.5	8	A.-Cu. NE	Cu.	50.8	Ω² ≡ a. d° p.
21	59.35	25.7	29.9	22.9	86.3	ENE	.7	8.8	A.-Cu. SE	Fr.-N. E	2.8	●² a. ●° p.
22	59.02	25.5	29.5	22.7	88.2	EbyN	1	7.3	A.-Cu. SE	S.-Cu. E	7.1	≡ ● a. ⌐⊿ p.
23	59.04	26.4	30.8	22.4	87	ENE	.7	4.2	Ci.-S., Ci.	Fr.-Cu. ENE	------	Ω² ≡ a.
24	59.88	26.9	30.6	23.2	85.4	ENE	1	4.8	Ci.-S.	Cu. E	------	Ω² ≡ a.
25	60.37	27.4	31	24.3	81.2	EbyN	2.2	3.3	Ci.-S.	Fr.-Cu. E	------	Ω² ≡ a.
26	60.75	25.3	27.9	23.6	88.3	NE	1	8.7	Ci.-S. NE	Cu.-N. E	19.5	● ⌐⊿ a. p.
27	59.13	26.6	30.4	24.6	87	ENE	1.8	7.3	Ci.-S.	Fr.-N. NE	2.5	● a. p.
28	58.70	26.8	30.4	24.9	85.4	ENE	1.3	6.7	A.-Cu. NE	Cu.-N. E	15	≡ a. ● p.
29	58.44	26.5	29.5	24.6	87.5	ENE	1	5.8	A.-Cu., Ci.-S.	N.-cf. NE	25.4	●² p.
30	57.68	25.3	27.5	23.2	90.3	ENE	.8	9.3	Ci.-S. E	Fr.-N. NE	13.5	● a. p.
31	57.70	25.2	27.7	23.3	92	NE, ENE	.5	9.2	Ci.-S.	Fr.-N. E	11.1	● a. p.
Mean	758.86	25.8	29.7	22.9	85.3	----------	.8	6.7	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	245.7	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758	25.5	28.6	22.4	69.5	NE quad.	8.3?	5.2	Ci.-S.	Cu. ENE	2.5	☰° ☊ ☋ ◯ a. ● p.
2	57.12	26.2	29	23.1	74.5	NE, ENE	9	5.7	Ci.-S.	Cu. ENE	1.3	☰° ☊ d a.
3	57.38	27	29.2	24	72.9	NE quad.	8.5	3.7	Ci.	Cu. ENE	------	☊ d a. ◹ p.
4	58.41	26.4	29.5	23.1	72.2	E	9.3	3.5	Ci.	Cu. ENE	------	☰° ☊ a.
5	58.75	26.1	29.9	22.2	68.2	N	7.9	3.2	Ci.	Cu. ENE	------	☰ ☊ a.
6	59.01	25.9	30.2	21.8	67.8	ENE	8	4.5	Ci.-S.	Cu. ENE	------	☊ a.
7	58.46	26.2	29.5	23	71.5	E, NE	11	6.2	Ci. N	S.-Cu., Cu. NE	------	☊ a.
8	58.75	26.7	29.7	23.5	67.8	ENE	10.5	5.5	Ci.	Cu., S.-Cu. ENE	.3	☊ a. d p.
9	59.58	25.8	29.9	23.3	70.7	NE quad.	11.7	5.3	Ci.	S.-Cu. ENE	2	☊ a. ●° p.
10	60.65	26.8	30.8	21.9	66.7	NE quad.	9.3	4.7	Ci.	S.-Cu., Cu. ENE, E	1.8	☊ ● a. ◹ p.
11	60.56	26.5	29.5	23.3	66.3	NE quad.	11	5	Ci.-S. SSE	Cu. ENE	2.5	☰° ☊ a.
12	60.42	25.5	29.2	23	72.2	NE quad.	10.6	5.8	Ci.	Cu.-N., S.-Cu. ENE	3.1	● d a. ◹ p.
13	60.26	25.4	28	22.1	70.2	NE	10.1	7.7	Ci.-S.	Cu.-N. ENE	3	● a.
14	60.06	25.4	28.8	21.9	67.7	NE	10.6	5.7	Ci.-S.	Cu., S.-Cu. ENE	------	☊ a.
15	58.92	26.2	29	23.2	68.2	NE, NNE	8.8	8.5	Ci.-S.	S.-Cu. ENE	------	☊ ☰° a.
16	57.08	26.1	28.5	23.2	67.2	Variable	5.4	8.8	Ci.-S.	Cu.-N. WNW, NNW	------	☊ ☰° a.
17	56.05	27	30.6	22.5	67.8	SW quad.	9.5	6.2	Ci., Ci.-S.	Cu. W quad.	------	☊ a. ◯ a. p.
18	57.28	27.4	30.5	24.6	66.7	SW, S	8.1?	4.7	A.-Cu. ESE	Cu. SW	------	☊ ☰° a.
19	57.78	26.6	31	22.9	70.8	E, S	5.9	4.2	Ci.-S.	Cu. S	41.7	☰° ☊ a. ◹ ∪ p.
20	59.03	25.6	29.5	22.1	76.9	Variable	6.5	6.5	Ci.-S.	Cu.-N. E	38.7	●² ◹ a. p.
21	59.17	26.1	29.5	22.8	73.3	E	8.7	5.3	Ci.-S.	Cu. ENE	.5	● d a. ◺ p.
22	59.09	26.4	29.6	23.9	73.5	NE quad.	7.8?	6.5	Ci.-S.	Cu.-N. ESE	.3	●° a. ◹ ∪ p.
23	58.74	27	30.5	23.5	71.3	E	7.1	2.8	Ci.	Cu. E	------	☊ a. ∞ p.
24	59.60	27.5	30.5	24.5	71.5	E	9.3	3	Ci.	Cu. E	------	☊ a.
25	60.51	26.9	30	23.9	73.7	E	14.1	4	Ci.	Cu. ENE	.3	☊ a. d p.
26	60.89	26	29.9	23.5	70	NE quad.	10.8	6.3	Ci.-S.	Cu.-N. E, ENE	------	☊ ◯ a.
27	59.14	26.9	30	24.2	67.5	NE quad.	14	4.3	Ci. E	Cu. ENE	------	☊ a.
28	58.50	26.9	29.5	23.6	70.8	NE quad.	12.5	4.3	Ci.	Cu. ENE	.5	●° a.
29	58.30	27.1	29.9	24.5	71	NE quad.	13.6	3	Ci., A.-Cu.	Cu. ENE	------	☊ a.
30	57.75	26.6	30.6	24.1	72.3	NE quad.	11.5	5.2	A.-Cu.	S.-Cu. E, ENE	------	☊ a. ◹ p.
31	57.57	26.6	29.2	24.5	71.2	NE quad.	9.9	5.8	Ci., A.-Cu.	Cu.-N., S.-Cu. ENE	------	☊ a.
Mean	758.80	26.4	29.7	23.2	70.2	----------	9.7	5.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	98.5	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.07	26.4	31.1	22.6	72.2	NE	1.8	6.7	Ci.-S.	Cu.	------	☊² ☰° ◯ a.
2	57.11	27.1	31.8	23.4	75.7	NE	1.8	6	Ci.-S. E, ENE	Cu.	------	☰° ◠ a. d p.
3	57.54	27.4	32.6	23.3	74.2	NE quad.	1.2	3.8	Ci.	Cu. E	------	☊ a.
4	58.38	27.6	32.5	24.1	70.3	NE	1.3	4.2	Ci.	Cu.	------	☊ a.
5	58.74	27	32.5	22.9	70.3	NE quad.	1.2	5.5	Ci.	Cu. NE	------	☊ a.
6	59.16	26.5	32.5	21.8	72.2	NE	.7	5.2	Ci.	Cu.	------	d p.
7	58.85	26.2	31.9	23.2	79	NE	2	7.8	Ci.-S.	Cu.	3.6	☊ a. ● p.
8	59.19	25.4	29.9	23	79.6	N	1.7	7.5	A.-Cu.	Cu. NE	1.3	┼ ◟ ● p.
9	59.86	26.6	31	22.9	75.5	NE	1.8	6.8	A.-Cu.	Cu. NNE	2	┼ ◟ ● p.
10	60.76	26.4	31.1	22.8	75.9	NE	2	5.5	Ci.	Cu. ENE	------	◟ p.
11	60.72	26.5	31.5	22.6	71.3	NE	1.7	5.3	Ci.-S. E, ENE	Cu.	.3	☊ ☰° a. ●° p.
12	60.49	26.6	31	22.9	71.5	NE	1	5.3	Ci., A.-Cu.	Cu. NNE	------	
13	60.15	26.3	30.5	22.9	70.8	NE	2.2	5.8	Ci.-S.	Cu. ENE	------	☊ a.
14	60.54	25.9	30.4	22.9	71.5	N	1.7	7.7	A.-Cu.	Cu. NE	.3	●° p.
15	59.54	25.5	30.5	22.3	75.4	NE	1.5	8	A.-Cu.	Cu. NE	------	d° p.
16	58.02	25.6	29.1	22.4	74.3	NE	1.2	8	A.-Cu., Ci.-S.	Cu.	------	
17	56.79	25.8	30.1	22.8	77.5	NE, SW	1.3	8.8	Ci.-S.	S.-Cu. WSW	.3	☰° a. ●° p.
18	57.66	25.7	29	23.2	82.3	SW	1.2	8.3	A.-Cu. SW	Cu.	6.1	☰° a. ┼ ● p.
19	58.05	25.9	30.4	22.1	79.5	SW	.8	5.7	Ci.	Cu.	1	◟ ●° p.
20	59.31	26.1	31.3	22.3	82.7	Variable	.3	8.2	A.-Cu. ENE	Cu.	.3	┼ a. ◟ ●° p.
21	59.33	26.4	32	23	78.5	NE quad.	.8	6.8	Ci.-S.	Cu.	------	◟ p.
22	59.20	26.4	32	23.4	79.3	NE quad.	1.5	7.7	A.-Cu. ENE	Cu.	------	┼° ◹ d° p.
23	59.16	26.4	32.2	22.4	79	NE quad.	.8	6.8	A.-Cu.	Cu.	------	d° ◹ p.
24	59.52	28.1	33.4	23.4	72.3	NE quad.	1.8	4.2	Ci.	Cu.	------	
25	60.50	27.5	32.4	23.8	72.1	NE	2.2	4.5	Ci.-S. NE	Cu.	------	◟ ◹ p.
26	60.54	27.1	32.4	23.5	72.5	NE	2.2	6.8	Ci.-S.	Cu.	------	◠ ◯ a.
27	59.04	27.3	32.5	24.1	73.5	NE	2	5.3	A.-Cu.	Cu. NE	1.3	● a.
28	58.65	27.5	32.3	23.4	71.7	NE	2	3.2	Ci.	Cu.	------	◟ ┼ d° p.
29	58.26	27.4	32.6	24.1	73	NE	2.2	2.8	Ci.	Cu.	------	
30	57.71	27	32.1	24	76	N, NE	1.8	6	A.-Cu. E	Cu.	------	d° ◟ p.
31	57.63	27.1	33.5	24	76.8	NE	2	7.5	A.-Cu. E	Cu. NE	------	d° a. p.
Mean	758.98	26.6	31.5	23.1	75	----------	1.5	6.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	16.5	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.24	23.7	29.2	17.9	86	NW quad.	4.4	8	Ci.-S.	Cu.-N. ENE	------	☊ ≡° a. d° p.
2	57.33	25.8	31.6	22.4	78.5	NW quad.	4.9	7.5	A.-Cu. SE	Cu. E quad.	2.1	≡° p a.
3	57.60	25.8	30.8	22.6	85.3	Variable	4.5	6.7	A.-Cu. E	Cu.-N. NE by E	------	d° a.
4	58.65	25.2	31.8	20.2	80.8	Variable	6.3	5	Ci.	Cu. SE	------	☊° ≡° a.
5	58.86	24.8	31.5	19.4	78.5	SW quad.	5.4	5.2	Ci. SE	Cu. N	------	☊° ≡° a.
6	59.38	24	29.3	18.3	78.7	Variable	4.4	7.7	Ci. SE	Cu.-N. NE by E	------	☊° ≡° a.
7	58.82	24.7	30	20.5	82.6	NW quad.	4.2	7.8	Ci.-S., A.-Cu.	Cu.-N. ENE	------	≡° a. p d° p.
8	59.02	24.8	30	21	85.8	Variable	4.7	8.5	Ci.-S.	Cu.-N. ENE, NE	4.3	≡° a. p ⊤ ●° p.
9	59.70	24.4	28.4	21.7	83.5	N quad.	4.6	8.5	Ci.-S.	Cu.-N. ENE	1.8	☊ ≡° a. ●° p.
10	60.74	26.2	31.7	22.2	73.5	Variable	6.3	5.7	A.-Cu.	Cu.-N. N,E by N	------	≡° a.
11	60.75	25.2	29.8	21	76.3	N quad.	5.5	7	Ci.-S.	Cu.-N. NE	------	≡° a. p. d° p.
12	60.72	23	29.5	20.2	90.8	S, NNW	4.5	7.8	Ci.-S.	Cu.-N. E, S	20.8	☊° d° a. ≡ ⌐ ◥ ● p.
13	60.24	25.5	30.4	20.7	72	NE quad.	6.1	8	A.-Cu. E	Cu. NE by E	2.8	≡° a.
14	60.29	23.5	29.6	19.9	82.5	NW quad.	4.2	8.5	Ci.-S.	Cu.-N. NE by N	1.5	≡° d a.
15	58.91	24.7	29.2	20.8	79.5	N	4.3	9.2	Ci.-S.	Cu.-N. NE	4.3	d° a. p.
16	57.02	23.4	24.9	22	94	NW quad.	5.2	10	----------	N. NW by W	9.1	≡° a. ●° d° a. p.
17	56.39	24.5	27.7	22.5	89.2	W quad.	6.9	10	Ci.-S.	Cu.-N. W	4.1	d° a. p. ≡° p.
18	57.56	25.5	29.9	22	84.4	S	4.7	7.2	A.-Cu.	Cu. WSW	------	d° a. ◟ p.
19	58.08	25	31	20.5	84.7	S quad.	5.5	4.5	A.-Cu. SSE	Cu.	.8	≡° a.
20	59.29	25	31	22	87.2	Variable	4.2	9.2	A.-Cu. SE	Cu.-N. N	2.8	d° ≡° a. p. ☋ p.
21	59.32	24.5	31	21.8	88.7	NW quad.	4.8	8.8	A.-Cu. ESE	Cu. ENE	2.6	●° ≡° a. p ◟ p.
22	59.26	24.8	29	21.9	87.8	Variable	3.8	8.8	A.-Cu., Ci.-S.	Cu.-N. SE	3.1	≡° ⊤° a. ☋° p. d
23	59.05	25.4	32	20.6	83.8	SSW, NNW	5.2	4.8	Ci.-Cu. SE by S	Cu. E	------	≡ ☊° a. ⊤ p.
24	59.81	25.9	32.3	20.9	78	Variable	5.3	4.5	A.-Cu. E	Cu.	------	☊° ≡° a.
25	60.55	26.9	32	21.7	72.1	NE quad.	5.2	4.2	A.-Cu. N	Cu.-N. E	------	≡° a. d° ◟° p.
26	60.98	23.6	30	21.2	86.3	N quad.	3.1	7.7	Ci.-S.	Cu. E	4.3	≡° a. ⌐ ◥ ●° p.
27	59.23	27.5	32.5	21.7	67.3	NE quad.	8.5	4.7	A.-Cu. E	Cu.	------	≡° a.
28	58.69	27.3	31.8	21.7	72.2	NE quad.	6.8	5.2	Ci.-S., A.-Cu.	Cu.-N. ENE	------	≡° a. p p.
29	58.52	26.7	32.2	21.9	75.7	Variable	4.9	4.8	A.-Cu.	Cu. E	1.5	≡° a. p p.
30	57.88	24.8	29.2	22	88.8	Variable	4.4	9	Ci.-S.	N. E	9.2	≡° p a. ⊤ ●° p.
31	57.88	25.3	29.8	23.4	87.5	NE quad.	4.3	9.7	Ci.-S.	Cu.-N. E	7.6	● a. p ⊤ ⌐ ◥ p.
Mean	758.99	25.1	30.3	21.2	82	----------	5.1	7.2	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	82.7	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.74	25	28.2	22	87.7	NW	0.3	7.3	Ci.-S. SW	Cu.-N. ENE	6	◡² d a. ● p.
2	57.80	26.8	31.5	23.1	79	NE quad.	1	6.7	Ci.-S. SW	Cu.-N., Cu. ENE	2.8	d a.
3	57.84	26.7	31.8	23.5	83.6	Variable	1	5.8	Ci.-Cu. SW	Cu. ENE	------	● a.
4	59	26.8	31	23.3	79.3	SE quad.	1	4	Ci.-S.	Fr.-Cu. E	------	
5	59.34	26.8	31	21.9	76.3	SE quad.	1	3.7	Ci. SW	Fr.-Cu. E	------	
6	59.65	26	30.3	22.8	83.8	Variable	.5	7	Ci., Ci.-S. SSW	Cu. ENE, E	------	☊° a.
7	59.03	25.6	30.4	23.3	86.8	NW	.8	6.7	Ci. SW	Cu.-N. ENE	6.9	d a. p.
8	59.39	25.4	30	22.8	87.7	N quad.	.3	8.7	Ci.-S. SW	Cu.-N. ENE	15.7	● a. p.
9	60.14	25.2	28	23.5	87.5	Variable	.8	8.7	Ci.-S.	Cu.-N. ENE	17.2	● a. p.
10	61.25	26	31	23	79.2	NE	.5	5.5	Ci.	Cu. NE	------	● a.
11	61.07	25.1	29.7	22.7	82.3	Variable	.3	5.7	Ci.-S.	Cu.-N. ENE	4.1	● p.
12	61.23	24.3	29.4	22.2	89.8	Variable	.3	7.5	----------	N. E	39.6	● a. ●² p.
13	60.88	25.2	29.2	22.2	78.5	NE quad.	.5	8.2	Ci., Ci.-S.	Cu.-N. NE, ENE	4.5	● a. p.
14	60.67	24.6	29.8	22.1	84.1	N quad.	1.2	8.5	A.-S.	Cu.-N. NE	1	● a. d p.
15	59.17	25.3	28.2	23.5	81.3	N	1.7	9.3	Ci.	Cu.-N. NE by N	11.4	
16	56.09	24.4	26	23.2	88.9	WNW	2.3	10	Ci.	N. NW	4.9	● ◞° a. p.
17	55.64	25.7	29.2	23.3	82.3	WSW	1.5	9.7	----------	N. WNW, WSW	6	d a. ● p.
18	57.48	26.2	30.3	23	83.5	W,E	.2	7	Ci.-S. E	Cu. SW	19.8	●° p.
19	58.29	26.6	31.3	22.6	82.7	SSE	.8	6	Ci.-S. WNW	Cu. ESE	------	● ◯° a.
20	59.60	26.6	30.9	24	81	ESE	.3	6.5	Ci.-Cu. SW	Cu. E	17.3	●° ◡² ☋° p.
21	59.76	25.8	30.8	23.2	87.5	SE	1.2	7.7	Ci., Ci.-Cu.	Cu.-N. ENE	3.8	● a. p.
22	59.45	26	30.5	23.8	87.5	ESE	.5	6.8	Ci.-Cu.	Cu.-N. ENE	1.5	● a. ⊤ a. p.
23	59.52	26.6	31.5	23.4	85.2	NNW, SSE	.3	5.3	Ci.-S. NW	Cu. ESE	------	☊² a.
24	60.42	27	31.5	23.7	82.8	ESE	.5	4.7	Ci.-S.	N.-Cf. ENE	1.8	☊² a. ●° ◠ p.
25	61.21	26.4	30.8	23	82	E	1.2	4.2	Ci.	N., Fr.-Cu. ENE	.3	☊² d a.
26	61.53	24.8	31.5	22.2	87	WNW	.2	7.8	Ci.-S. SW	Cu. ESE	13.7	● ◞° p.
27	59.94	26.8	31.8	22.5	78.2	ESE	.7	5.3	Ci.	Cu. E, ENE	1.8	● a.
28	59.28	26.5	31.2	23.8	82.8	ESE	.5	5.3	Ci.-S.	Cu. ENE	3	● p.
29	59	26.9	31.6	24.5	80.5	E quad.	.8	4.2	Ci.	Cu. E	2.8	☋° ☊² a. ● p.
30	58.44	25.5	31	23.4	89.7	WNW	.3	7.7	Ci.-S.	N. E	21.3	☊ a. ● ⌐ ◥² a. p.
31	58.17	26.1	29.9	22	87.7	NW, E	.8	8.2	Ci.-S. SW	Cu.-N. ENE, NE	11.4	◯° a. ◞° ● ⌐ ◥² p.
Mean	759.32	25.9	30.3	23	83.7	----------	.8	6.8	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	218.6	

METEOROLOGICAL DATA, ETC.—Continued.

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.		Clouds. Prevailing form and its direction. Lower.		Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Perct.*		*0–12.*	*0–10.*					*mm.*	
1	758.91	24.9	30.5	20.3	87.5	N, NE	1.3	7.8	Ci.-S.	SE	S.-Cu.	E	3.3	☊ a. p° d² p.
2	58.10	24.9	29.9	22	91	N	.8	6.5	A.-Cu.		S.-Cu.	E	4.8	●° a. p.
3	58.12	25.8	31.5	21.4	85.8	N, NE	1.2	3.7	A.-Cu.	SSE	S.-Cu.	E	------	
4	59.13	25.7	31.5	21.7	85.7	N	1.3	2.8	Ci.		Cu.	NE	8.6	☊ a. d ● ≲ p.
5	59.46	25.5	29.7	21.1	84.2	N	1.2	3.8	Ci.-S.	SE	S.-Cu.	E	------	☊² a.
6	59.85	24.2	29.7	20.8	88.7	N	1.3	7	A.-Cu.	NE	S.-Cu.	NE	30.5	☊ a. ● p.
7	59.34	24.2	28.6	22.1	92.1	N	.8	6.7	Ci.-S.		S.-Cu.	NE	3.8	⌒ ●° p.
8	59.79	24.7	28.9	21.7	91	N	1	7.3	A.-Cu.	NE	S.-Cu.	NE	12.8	d² a. p° p.
9	60.43	24.3	29.6	22.3	90.4	N, NE	1.3	7.5	A.-Cu.		S.-Cu.	ENE	8.5	● a. p.
10	61.30	25.7	31.8	22.1	80.8	NE quad.	1.3	4.8	Ci.-S.		S.-Cu., NE,	ENE	------	≡ a. ≲ p.
11	61.22	25.4	31.5	20.6	81.8	N, NE	1.2	4.7	Ci.-S.	ESE	S.-Cu.	ENE	------	≡ a. ≲ p.
12	61.20	24.4	28.7	22.2	89	N	1	7	A.-Cu.		S.-Cu.	ENE	38.1	≡ a. ● p.
13	60.94	24.9	30.7	22	81.8	N, NE	1.5	7	Ci.-S.	SE	S.-Cu.	ENE	------	
14	60.86	24	30.5	21.3	86.8	N	1	7.7	Ci.-S.	SE	S.-Cu.	NE	12.2	● p.
15	59.61	24.5	28.5	21.3	86.2	N, NE	1.5	9	Ci.-S.		S.-Cu.	NE	11.4	≡ a. d° p.
16	56.68	24.3	24.3	22.5	95.7	NW quad.	1.7	10	A.-Cu.		N.	N, NW	60.1	● a. p.
17	54.72	23.9	26.2	22.5	96	SW	6.7	10	A.-Cu.		N.	SW	89.9	☄° ● a. p.
18	57.30	25.3	28.6	23	87.8	SW	2	8	A.-Cu.	S	N.	SW	1	● a. ⊓ p.
19	58.48	26	30.5	22	85.8	N	.8	3.2	Ci.-S.	SE	Cu., S.-Cu.		------	≲ ⊤ p.
20	59.77	25.7	30	22.3	88	N	.8	6.3	A.-Cu.	ESE	S.-Cu.	E	------	⊤ ⊓ ⌣ p.
21	59.78	25.4	30	21.9	88.8	N	.8	7.7	A.-Cu.	ESE	S.-Cu.	E	4	●° ⊓ ≲ p.
22	59.80	24.6	27.8	22.4	93.5	N	.7	7.8	A.-Cu.		S.-Cu., N. E,	ESE	23.4	d a. ⊤ ● ⊓ ≲ p.
23	59.71	25.2	29.1	21.4	89.7	N	.8	6	A.-Cu.	ESE, SE	S.-Cu.	E	2	⊤ a. p. ⊓ ≲ d p.
24	60.62	24.7	30.3	21.6	90.5	N	1	5	Ci.-S.		S.-Cu.	E	13.5	⌣ ☊ ● ⊤ ⊓
25	61.42	26.2	32.9	20.8	80.8	N, NE	1.5	1.5	Ci.		Cu.	E	1	☊ a. ≲ ⊓ p.
26	61.69	25.7	33.5	22	84	Variable	1.3	6.7	Ci.-S.		S.-Cu.	E	------	d a.
27	60.25	26.7	32.8	22.4	80.3	NE quad.	1.3	3.2	Ci.-S.		S.-Cu.	E	------	⌣ a. ⊓ p.
28	59.56	26.2	33.2	21.9	85	NE quad.	1.3	5.2	Ci.-S.	SE	S.-Cu.	E	5.6	⊓° a. ⊤ p. ≲ p.
29	59.23	26.9	33.6	22.3	81	NE quad.	1.5	2.8	Ci.-S.		Cu.	E	1.5	p° p.
30	58.74	25.7	30.9	22.3	88	N, SE	1	6.3	A.-Cu.		S.-Cu.	ENE	1.5	☊ a. ≲ p. d a. p.
31	58.51	25.4	30.7	22.8	89.3	N, S	1	6.3	A.-Cu.		S.-Cu.	E	7.7	≡ ● a. ☄° p. ≲ p.
Mean	759.50	25.2	30.2	21.8	87.3	----------	1.4	6.1	----------		----------		------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------		----------		345.2	

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p.h.*	*0–10.*					*mm.*	
1	758.93	27	31.7	24	76.3	E quad.	----------	7.5	Ci.-S., Ci.		Cu.-N.	NE	22.3	●° a. p. d° p.
2	58.07	24.8	27.2	22.6	90.8	NE	9.6	8.2	Ci.-S.		Fr.-N., Cu.-N.	NE	24.4	● a. p.
3	58.14	26	31.1	20.8	82.3	E	5.7	1.2	Ci.		Cu.		------	≡° a.
4	58.91	26.8	30.5	23.7	79	NE, ENE	10.2	1.7	A.-Cu.	NW	Cu.		------	≡° a.
5	59.19	27.3	31	24.9	73.7	NE, ENE	9.3	3.8	Ci.	SSW	Cu.		------	
6	59.58	26	29.7	23	79.8	NE, ENE	7	7.5	Ci.-S.		Cu.-N.	NNE	.3	●° a. p.
7	59.45	26.8	31.1	24.9	73.2	NE	16.9	7.5	Ci.-S.		Cu.-N.	NE	2.8	d a. p.
8	59.96	25.3	27.5	23.4	84.5	NE quad.	12.7	8	Ci.-S.		Cu.-N.	NE	6.9	● a. p.
9	60.66	25.6	27.2	23	81.6	NE quad.	18.4	7.5	Ci.-S.		Cu.-N.	NE	17.5	● a. p.
10	61.68	26.4	29.8	23.6	73.7	NE, ENE	14	4.8	Ci.		Cu.	NE	------	● a.
11	61.37	26.4	30	24	77.2	NE	10.8	5.8	Ci.		Cu.-N.	E, ENE	------	≡° a.
12	61.13	25.3	29.3	22.5	81.8	ENE, NE	6.9	7.8	Ci.-S.		Cu.-N.	ENE	12.5	d° a. ● p.
13	60.87	26.2	28.8	22.2	73.4	E	16.7	6.5	Ci.-S.		cu.,cu.-N.	E, ENE	2.6	● d° a.
14	61.31	25.5	27.4	21.8	77.5	NE	13.6	6.3	Ci.-S.		N.	ENE	14.7	● a. p.
15	60.06	25.4	28.9	23	73.6	NE, ENE	13.7	8.5	Ci.-S.		Cu.-N.	NNE	.8	d° a. ●° p.
16	57.34	24.4	25.7	22.7	84.4	NE	9.3	10	Ci.-S.		Fr.-N.	N quad.	62.2	d² a. ● p.
17	53.31	23.8	24.6	22.5	94	W quad.	9.2	10	Ci.-S.		Fr.-N.	NW	104.6	d ●² a. p. ⊏ p.
18	56.16	25.5	29.6	23	84	W	8.7	8.5	Ci.-S.		Cu.-N.	W	.3	● a.
19	57.95	26.5	30	22.4	83.2	E, ESE	5.6	2.8	Ci.		Cu.	S	------	≡° a. d ≲° p.
20	59.23	26.6	31.1	22	82.8	E	5	4	A.-Cu.	ESE	Cu.		------	≡° a. d p.
21	59.60	27.1	31	23.4	80	ENE	8.9	4	Ci.	S	Cu.		7.6	≡° ◯ a.
22	59.66	26	30.6	23.4	84.9	NE	7.6	7	Ci.-S.		Cu.	E	1.3	● d a. d° p.
23	59.40	27	31	23.7	82.7	NE, E	7.3	3.8	Ci.		Cu.	E	8.9	⊤ d° p.
24	60.38	27.3	30.6	24.6	83.8	NE, E	11.4	4.5	Ci.		Cu.	E	2.8	● a. d p.
25	61.65	27.4	30.7	24.9	76.6	E quad.	13.7	1.3			Cu.-N.	E	1.8	≲ p.
26	61.79	26.8	30	24.4	78	E quad.	13	4.3	Ci.		Cu.	E	6.6	d ● a.
27	60.39	27.1	30.7	24.5	79	E, NE	17	5.5	Ci.		cu.,cu.-N.	ENE, E	7.8	● p.
28	59.70	27.6	30.8	24.8	78.7	NE, E	14.8	3	Ci.		Cu.	ENE	2.5	≡° d a. d p.
29	59.50	27.1	31	22.7	78.2	NE, E	14	3.8			Cu.-N., Cu.	ENE, E	17	d² a ⌒ ●² p.
30	58.79	26.8	29.9	24.4	83.3	NE, E	13.2	5	Ci.-S.		Cu.-N.	ENE, E	2.6	●° a. p.
31	58.53	26.7	29.7	23.2	85.3	E, NE	13.3	5.5	Ci.		Cu.-N.	E	18	d ● a. p.
Mean	759.44	26.3	29.6	23.4	80.6	----------	11.2	5.7	----------		----------		------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------		----------		348.8	

METEOROLOGICAL DATA, ETC.—Continued.

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.95	26.4	30.6	22.2	78.9	N quad.	16.4	5.7	Ci. SE	Cu. E	------	♌° a.
2	58.09	26.4	29.7	24	81.8	N quad.	---------	7.7	Ci.	S.-Cu. NE	------	☌° a. p.
3	58.15	26.1	30.6	22.8	86.3	NW	8.3	6.2	A.-Cu. SSE	Cu. SE	------	☌° a. ☐◹ ∩ ◹ p.
4	58.93	26.1	28	23.8	86.4	N quad.	17.6	9	A.-Cu. SW	S.-Cu. NE, N	------	☌ ◹° p.
5	59.33	25.6	26.7	24.1	87.2	NW quad.	15.1	7.5	A.-Cu. SW	S.-Cu. NE	15.3	● a. ◹ p.
6	59.98	25.6	27.9	23.7	85.7	N	24.6	8.5	A.-Cu. NE	S.-Cu. N	6.6	●° p.
7	59.99	26.2	28.3	23.4	80.1	NNE	---------	7.3	A.-Cu. NE, ENE	S.-Cu. NE	------	☌ a.
8	60.53	26.6	28.8	25	77.7	NNE	30.3	6.8	Ci. E	S.-Cu., Cu. NE	------	
9	61.09	26.5	28.4	25	78.5	NE	23.7	7.3	A.-Cu. ENE	S.-Cu. ENE	------	☌ a.
10	61.80	26.3	30.3	22	80.2	NE quad.	11.9	5.3	A.-Cu. E	S.-Cu. NNE, ENE	------	♌° a. ◹ p.
11	61.64	26.2	30.1	21	78.3	NE, N	15.8	5.5	Ci.	Cu. NE	------	♌ ☰° a.
12	61.17	25.2	28.4	23.5	85.2	NE quad.	12.5	9.2	Ci.	S.-Cu. NE	4.6	●° p.
13	60.96	25.8	29.2	23.6	80	E	12.6	9.7	Ci.	S.-Cu. NE	------	☌ p.
14	61.38	26.3	29.2	24.2	75.9	NE	18.9	5.8	Ci. ESE	S.-Cu. NE, E	------	
15	60.64	26	28.4	24	75.8	NE	29.5	8.3	A.-Cu. NE	S.-Cu. NE	------	
16	58.72	25.9	27	25.1	75.7	N quad.	32.5	8.3	Ci.	S.-Cu. NE	2.5	☌° a.
17	56.50	25	26	23.3	83.5	NW	29.9	10	Ci.-S.	N. N	3.8	☌ a. p.
18	56.21	27	32	22.8	75.8	SW	---------	9.2	Ci.	S.-Cu. N	------	☐◹ p.
19	57.44	26.5	32.7	23.5	81	SW	7.2	6.2	Ci.	Cu. SE	------	☌ ♅° p.
20	59.16	25.7	30.4	21.9	88.2	SW, N	7.2?	6.7	Ci.	S.-Cu. E, SE	------	♌° a. ☐◹ ☌° ◹ ♅² p.
21	59.51	26.7	31.5	22.5	83.8	SW, N	10.4	6.7	Ci. SE	Cu., S.-Cu. SE, N	------	♌² ☰ a. ☐◹ ♌° ♋ ♅° p.
22	59.44	26.5	31.7	23.9	85.1	SW	7.5	9	A.-Cu. SW	S.-Cu., cu. NE, SE	7.4	☐◹ ● ◹° p.
23	59.24	26.3	29.7	23.5	85.8	NW quad.	7.3	8.7	Ci.	S.-Cu. NE, SE	1	☌° a. p. ♋ ♅² p.
24	60.11	27.1	30.4	24.5	85.3	NNE, NE	11	7.2	Ci.	S.-Cu. NE	------	☐◹ ◹° ♅° p.
25	61.48	27.1	31.7	23	83.7	NE quad.	13.6	4.2	Ci.	Cu. NE, E	------	♌° ☰° ◹ ♅² p.
26	61.91	26.6	30.7	22.6	81.8	NE	18.7	5.3	A.-Cu. E	S.-Cu. NE	------	♅ a. d p.
27	60.71	27.2	30	25.4	80.2	NE	26.6	5	Ci.	Cu., S.-Cu. NE	5.1	♅² d p p.
28	59.98	27.3	30.2	25.2	79.7	NE	26.6	4.7	Variable	S.-Cu. NE	------	☌° ♅° p.
29	59.56	27.2	30.4	25.8	82.5	NE	22.5	5	Ci.	S.-Cu. NE	1.5	♅ ♅° a. p. d p a.
30	58.79	27.6	31.2	25.4	82.5	NE	18.2	8	A.-Cu. ENE	S.-Cu., Cu. NE	------	♅ ♅° a. ┬° ☐◹ ◹° p.
31	58.69	27.4	31	23.8	84	NE	20.7	5.8	Ci.	S.-Cu. NE	5.3	♅° ● a. ☐◹ ◹ p.
Mean	759.68	26.1	29.7	23.7	81.8	----------	17.8	7.1	----------	----------	------	
Total	--------	------	------	------	------	----------	---------	---------	----------	----------	53.1	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.50	26.9	33.2	20.5	68	E	1.7	6.3	Ci.-S., Ci. SE	S.-Cu., Cu.	------	◡° a. ☾° ♌° p.
2	57.72	25.4	32	18.4	68.9	E quad.	1.5	3.8	Ci.	Cu. E	------	♌² a.
3	57.97	27.3	33.2	22.5	66.8	NNW	1.1	5.7	A.-Cu. SW	Cu. N	------	
4	58.64	26.8	33.4	22.5	72.3	NW, ESE	.9	6.5	A.-Cu. SW	Cu. SSE	1	☌ ┬ ◹ p.
5	58.99	26.2	34.1	23	79.8	NW, NE	.6	5.8	Ci.	Cu. E	8.9	● p.
6	59.64	26.4	31.7	22.6	74.2	NNW	.8	6.7	A.-Cu. SE	N., Cu.-N. NE	------	♌² ☰ a.
7	59.61	26.4	31.2	22	67.8	E quad.	1.1	6.7	A.-Cu. SSE	Cu. E	------	♌° a.
8	60.11	26.1	31.2	22	66.2	E	1.8	3.8	Ci.	Cu. NE	------	♌² ∞° a.
9	60.92	25.8	30.6	22	69.2	E quad.	1.8	5.7	A.-Cu. E	S.-Cu. E	------	♌° a.
10	61.50	25.9	31.3	22.4	73.8	NE quad.	1.2	7.7	Ci.-S.	N. E	1	☌° a. p.
11	61.42	25.9	31.7	22.5	71.3	NE, ESE	1.7	6.8	A.-Cu. SE	N., S.-Cu. E	------	♌° a. ☌° p.
12	60.84	26.2	32.1	21.4	70.8	E	2.1	5.3	Ci., A.-Cu.	S.-Cu. ENE	------	♌° a. ☾° p.
13	60.82	25.5	31.2	21.5	71.4	E	2.3	7.5	Ci.-S.	N. E	------	♌° a. ☾² p.
14	61.11	25.4	30	20.8	67.2	E	1.7	5.3	Ci. SE	Cu. E	------	♌² a. ●² p.
15	60.64	24.8	30	20.5	68	E quad.	1.3	7.3	Ci.-S. S	N. E	------	☾² p.
16	58.67	25.8	32.7	19.2	64.8	N quad.	.7	6.3	Ci.-S., Ci. SE	Cu. ENE, E	------	♌² a. ☾² a. p.
17	57.12	25.1	28	22.4	72.2	NW, NE	1.7	10	Ci.-S.	N. NE	.5	☌° a. ♅² p. ♆² a. p.
18	56.21	26.5	32.8	22	68.9	NW quad.	.4	9.5	A.-Cu. N	N. NW	------	
19	57.04	28	34.2	23	68.7	SW quad.	1.2	7.5	Ci.-S.	N. SW	------	☌° a.
20	58.78	28.2	34.3	22.4	69	E quad.	.5	7.7	Ci. NE	Cu. S	.2	☌° ┬ ◹ p.
21	59.18	28.2	33.6	23.1	72.7	NW, SW	.5	5.8	Ci. SSE	Cu.-N. SE	1.8	♌² ☰ a. ┬ ☌² p.
22	59.14	27.4	33	22.9	70.3	ESE, NW	1.3	7	A.-Cu. SE	N. S	------	☌° p.
23	59.14	26.1	35	22.2	------	NW	.8	7.8	Ci.-S.	N. S	24.4	●² ☐◹² ☄ᵛ² ☌° ♅² ◡²
24	60.14	26.4	31.6	22.2	------	ESE	1	7.3	Ci.-S. SE	Cu.-N. ESE	------	◡² ◹ p.
25	61.25	26.7	31.5	22.8	------	E quad.	1.8	4.8	A.-Cu. SE	s.-cu , cu. E, ESE	------	♌° a.
26	61.58	27	31.8	22.4	------	E	2.2	3.5	A.-Cu., Ci.	Cu. E	------	♌² a.
27	60.44	26.8	31.8	22.4	------	E quad.	2.1	4.3	A.-Cu.	Cu. E	------	
28	59.75	26.6	33.2	21.5	------	E	2.3	3.5	A.-Cu., Ci.	S.-Cu., Cu. E	------	
29	59.50	26.6	32.2	21.3	------	E	2.8	3.5	A.-Cu. NE	Cu. E	------	♌° a.
30	59.01	26	30.6	21.5	------	E, NW	1.5	5	A.-Cu. SE	Cu. E	.8	♌° d° ● a.
31	58.48	27	31.6	22.5	------	E quad.	2.6	5.2	Ci. SE	S.-Cu., Cu. E	------	♌° a.
Mean	759.48	26.4	32.1	21.9	70.1	----------	1.5	6.1	----------	----------	------	
Total	--------	------	------	------	------	----------	---------	---------	----------	----------	38.6	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[$\phi = 16°\ 03'$ N; $\lambda = 120°\ 20'$ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.34	26.4	33.4	21.6	78.6	SE, NNW	9.7	7.7	Ci.-S.	S.-Cu.	----------	☾ ☋ a.
2	57.53	27	36	19.5	74.3	SE	12.6	2.5	----------	S.-Cu.	----------	
3	58.04	27.4	31	25.4	79.2	NW	18	6.5	Ci.	S.-Cu. NNW, W	----------	
4	58.58	26.5	30.7	22.9	81.8	NW	11.3	5.3	Ci.	S.-Cu.	----------	
5	58.91	26.2	31.1	22.8	84.8	NW	12.1	6	Ci.-S.	Cu.	----------	
6	59.70	26	30.8	22	85.4	NW, NE	11.4	4	----------	S.-Cu.	----------	☇ a.
7	59.47	26.3	31.9	22.9	83.3	NW	8.7	5	----------	S.-Cu.	----------	
8	59.87	26.2	31.4	21.5	79.8	NNW, S	12.1	1.8	----------	S.-Cu.	----------	
9	60.49	26.5	34	21.4	78	N, S	10.7	5.7	Ci.	S.-Cu. S	----------	
10	61.24	26.7	33.3	22.5	79.2	NW, S	12.5	5.7	Ci.	S.-Cu.	.2	d p.
11	61.22	26.4	33	22.3	82.3	SE, N	13	7.8	Ci.	Cu. S	----------	d ☇ ⌒ p.
12	60.82	26	32.4	21.8	82.3	Variable	10.4	4.8	----------	S.-Cu.	6.1	☊ a. d p p.
13	60.34	26.5	34.7	21.7	79.8	SE, S	12.8	7.3	Ci.	Cu. SE	----------	☾° a.
14	60.77	27.3	33.8	23.2	66.8	S, SE	13.3	8.2	Ci.-S.	S.-Cu.	----------	
15	60.42	26.5	32.4	22.5	74.7	Variable	9.8	5.5	Ci.-S.	Cu. ESE	----------	☋ p.
16	58.63	26.6	34.1	21.3	75.2	SE, NW	10.1	6.7	Ci.-S.	S.-Cu.	----------	☩² a. p. ☙² ☋ p.
17	56.94	26.6	31.2	23.1	79.7	N, NW	6.1	9.3	Ci.-S.	S.-Cu.	----------	☙² ☰° ☾ a. ☙ p.
18	56.08	26.6	32.8	23	81.2	NW	8.2	9.2	A.-Cu.	S.-Cu.	----------	☋ p.
19	56.92	26.8	33.7	21.9	81.3	S quad.	8.9	8	Ci.	Fr.-Cu. SE	1.8	p ☇ ⌒ p.
20	58.84	27.4	34.8	23.4	81.7	SE, NW	12.2	8.3	Ci.	Cu. SE	----------	☇ ☽ p.
21	59.21	27.6	32.6	23.8	82.1	Variable	9.5	5.7	Ci.-S., A.-Cu.	Cu. SE	----------	☋ ☇ p.
22	59.02	27.4	36.2	23.5	80.3	Variable	9.2	8.7	A.-Cu	N. NE	20.8	p ☇ ◪ p.
23	59.28	25.7	31.4	22.3	89.2	NW	9.2	8.7	A.-Cu.	Cu.-N.	16.2	●° a. p. ◪ p.
24	59.92	25.7	34.6	22	87.3	Variable	8.7	7.5	Ci.-S.	S.-Cu.	63.5	d° a. ◪² ☇² ●² p.
25	60.97	26.2	34.6	22.1	85.5	Variable	9.5	5.2	Ci.-S., A.-Cu.	Cu. SE	1.3	☋ a. p ◪ ◠ p.
26	61.30	27.4	33.6	23.5	78.2	S, N	12.1	1.8	A.-Cu.	Cu.	----------	
27	60.04	27.4	35.8	20.5	71.2	SE, S	11.6	.5	----------	Cu.	----------	
28	59.27	27.3	33.8	22.4	72.5	S	14.4	.8	----------	Cu.	----------	
29	59.17	26.9	35	21.9	75.8	SE, NNW	12.8	2.3	----------	Cu., S.-Cu.	----------	☋° a.
30	58.61	27.9	36.1	21.5	71.8	SE	9.8	3.7	A.-Cu.	S.-Cu. ESE	----------	
31	57.98	28	36.6	22.8	73.5	SE quad.	9.9	3.2	Ci.-S., Ci.	Cu. E	----------	
Mean	759.29	26.8	33.4	22.4	79.2	----------	11	5.6	----------	----------	----------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	109.9	

BOLINAO.

[$\phi = 16°\ 24'$ N; $\lambda = 119°\ 53'$ E; barometer above sea, 7.5[1] meters; gravity correction not applied, —1.65 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.31	26.4	30.1	22.8	81.3	Variable	2.2	9.5	Ci.-S.	Cu.	----------	☙² a.
2	57.43	26.6	31	21.2	76	SE, NNW	2.7	5	Ci.-S.	Cu.	----------	☰ a.
3	58.24	27	29.5	25.5	77.7	N quad.	3.5	7.7	Ci.-S.	Cu.-N.	----------	
4	58.69	26.6	29.5	24.9	78.5	NNE	3.5	7.2	Ci.-S.	Cu.	----------	☰° a.
5	58.98	25.6	29.1	21.4	82	N quad.	3	6.3	Ci.-S.	Cu. NNE	----------	☰ a.
6	59.74	26	28.2	25.1	78	NNE	4.3	6.7	Ci.-S.	Cu.	----------	d a.
7	59.42	25.8	28.5	23.4	79.8	NNE	3.3	6.5	Ci.-S.	Cu.-N.	----------	
8	59.85	25	30	20.4	80.9	NNE	2.2	4.3	Ci.-S.	Cu.	----------	☰ a.
9	60.28	26.3	32	21.4	76.3	SSE, NNE	2.8	8.7	Ci.-S.	S.-Cu.	----------	☰° a.
10	61.08	26.6	32.4	21.9	77	SSE, ESE	2.8	9.3	Ci.-S.	Cu.	----------	☰° a.
11	61.02	26.4	32.8	21.9	79.3	SE quad.	2.3	8.7	Ci.-S.	Cu-N.	----------	☰° a.
12	60.59	26.4	29.2	22.7	80.2	NE quad.	2.8	4.7	Ci.-S.	Cu.	----------	☰° a.
13	60.16	26.8	32.6	22.1	77.8	SE quad.	2.8	10	Ci.-S.	Cu.-N.	5.6	● ☇ p.
14	60.42	27.3	33	23.1	75.2	SE quad.	3	9.7	Ci.-S.	Cu.-N.	----------	☰° a. d p.
15	60.34	27	32.4	22.9	76.7	NE quad.	3	7.8	Ci.-S.	S.-Cu.	----------	
16	58.47	27.4	32.6	24.9	78.3	Variable	2.3	9.7	Ci.-S.	Cu.	----------	☙° p.
17	56.82	26.7	30.9	22.9	77.2	N quad.	2.2	9.8	Ci.-S.	Cu.-N.	----------	☰° a. ☙° p.
18	56.05	26.7	31.1	22.5	80.3	Variable	2.3	10	Ci.-S.	Cu.-N.	----------	☾° a. ☙° p.
19	56.66	27.1	32.5	23.4	81.7	Variable	1.8	10	Ci.-S.	Cu.-N.	2.5	☰° a. ● p.
20	58.66	26.5	32.9	24.9	86	SE quad.	1.8	9.8	Ci.-S.	Cu.-N.	6.9	◪ ● p.
21	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
22	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
23	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
24	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
25	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
26	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
27	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
28	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
29	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
30	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
31	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	
Mean	759.06	26.5	31	23	79	----------	2.7	8.1	----------	----------	----------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	

[1] Height of the barometer above sea, since 10 p. m. of the 10th.

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.

[ϕ16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	636.11	18.5	24.6	14.1	81.1	E quad.	13.6	8.6	Ci.-S.	Cu.	------	⚓ Ω² ≡° a. ≡ p.
2	35.40	19.1	26.6	15.5	61	SE quad.	18.4	1.1	Ci.	Cu.	------	∞ p.
3	35.84	18.1	24.7	14.7	86.8	Variable	12.6	7.7	Ci.-S.	S.-Cu. W, WSW	------	Ω a. ≡² p.
4	36.24	18.4	25	15	82.5	W quad.	10.9	4.4	Ci.	Cu.	------	Ω ≡° a.
5	36.47	18.1	25	15.1	87.8	W quad.	11.6	5.9	Ci.	Cu.	------	Ω ≡° a. ≡ p.
6	36.98	17.8	24.3	13.7	90.5	Variable	12.8	8.6	Ci.	S.-Cu. W	------	Ω² a. ≡ a. p.
7	36.71	17.1	23.1	14.4	89.8	Variable	12.6	7.9	Ci.	S.-cf. N	------	Ω ≡° a. ≡ d° p.
8	37.09	17.8	23.7	13.5	77.8	E quad.	13.4	5.6	Ci.	S.-cf. SSE	------	≡ p.
9	37.76	17.1	23.7	14.4	85.5	E quad.	14.7	8.4	Ci.	Cu. NE	7.6	≡ ● p.
10	38.34	16.4	23	14.4	95.2	E quad.	10	7.9	Ci.	Cu. N	11.7	● ≡ ⊤ p.
11	38.10	16	21.3	14.3	99.3	E, W	14.9	9.1	Ci.	S.-Cu. SE	5.1	≡° a. ≡² d ● p.
12	37.77	16.2	21.8	13.9	94.8	Variable	12.8	6.3	Ci.	Cu.	17.5	Ω ≡ a. ≡² ● p.
13	37.49	16.6	22.5	13.9	94.7	E quad.	16.3	8.1	Ci.	Cu. SEbyE	20.1	≡² ● p.
14	37.88	15.9	21.5	13.4	91.8	E, W	11.3	8.9	Ci.	N.-cf. E	1	≡° a. p.
15	37.57	16.6	21.4	14.4	93.5	SE, W	8.6	7.9	Ci.	Cu.	.5	≡° a. ≡² p.
16	36.24	17.3	22.8	14	87.8	Variable	10	8.4	Ci.	Cu.	------	Ω a. ≡° p.
17	34.91	17.3	23.2	14.6	85.2	Variable	8	9.4	A.-Cu. NE	S.-Cu.	------	◯ ⊕ a. ≡² d² p.
18	34.14	16.6	22	15	92.3	W quad.	11.1	10	A.-Cu.	Fr.-N. NNE, ENE	5.1	≡² a. d ≡ p.
19	34.87	17.1	22.2	14.4	92.2	SW quad.	9.5	9.9	Ci.-S.	Cu. SW	12.2	≡² ● p.
20	36.50	17.8	23.1	15	94.2	SE quad.	12.3	8.1	A.-Cu. SSE	S.-Cu. S	------	≡² ⊤ ≤ p.
21	37.07	18	23.1	16	95	E quad.	12.2	8.6	Ci.	S.-Cu.	2.8	Ω ≡° a. d ≡ ≤ p.
22	36.91	17.7	22.3	15.7	88.6	SE quad.	12.1	8	Ci., A.-Cu.	Fr.-N.	5.3	Ω² ≡ a. ≡° ● ⊤ p.
23	36.83	17.2	21.8	15.1	96.2	WSW	10	9.4	A.-Cu. SSE, S	S.-Cu , N.	18.5	≡ ● ⊤ d² p.
24	37.54	17.6	23	15	91.8	E quad.	14.1	7.9	Ci.	Cu. SSE	6.6	≡ ● d ⊤ ◠° p.
25	38.54	18.1	24	15.8	85.6	E	23.2	5.6	Ci.-Cu.	Cu.	15.5	⊤ ≡² ● ◠ p.
26	38.89	18.2	24	14.2	86	E quad.	13.9	3	Ci.-Cu.	Cu.	------	≡ p.
27	38	19.4	25.6	14	57.2	E quad.	14.3	1.7	Ci.	Cu. SSE	------	≡ p.
28	37.23	19.5	25.2	16.2	63.7	E quad.	18.3	3	Ci.	S.-Cu. W	------	
29	37.08	18.4	25.4	14.5	82.4	SE quad.	21	3.4	Ci.	Cu.	------	≡ p.
30	36.81	18	25	15.3	79.3	E quad.	14.1	6.7	Ci., Ci.-Cu.	S.-Cu. SE	------	d° a. ≡° p.
31	36.36	18.8	25.4	14.9	82.1	E quad.	14	6.4	Ci.	Cu.	------	Ω a. ≡ ⊤ p.
Mean	636.89	17.6	23.6	14.7	86.2	----------	13.3	7	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	129.5	

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.48	27.2	32.3	22.7	77.3	Variable	1	2.7	Ci.-S.	Cu.	------	☋ ≡ a.
2	57.61	27	32.6	22.6	68.7	SSE	1.2	0	Ci.-S.	Cu.	------	☋ ≡° a.
3	58.49	25.9	31.5	21.7	73	N quad.	1.2	1.7	A.-Cu.	Cu., S.-Cu.	------	≡ a.
4	58.62	25.3	32	19.3	71.3	N quad.	1	0	Ci.	S.-Cu., Cu.	------	☋ ≡ Ω a.
5	59.31	25.5	31.6	21.6	70.9	N quad.	1.3	.3	Ci.-S., Ci.	S.-Cu.	------	≡° a.
6	59.95	24.2	29.4	20.2	74.5	N quad.	1.5	0	Ci.	S.-Cu.	------	≡ Ω a.
7	59.55	24.9	31	20.7	70.8	N quad.	1.2	.3	Ci.-S.	S.-Cu.	------	≡ a.
8	59.92	26.7	32	21	63	N quad.	.8	0	Ci.-S., Ci.	S.-Cu.	------	≡ Ω a.
9	60.51	26.8	31.8	22.8	67.9	Variable	1.2	2.8	A.-Cu., Ci.	S.-Cu.	------	≡ a.
10	61.24	26.4	31.8	23.5	75.4	N quad.	1.2	2.8	Ci.	Cu.	------	≤° p.
11	61.26	26.1	31.5	22.4	75.8	Variable	1	2.8	Ci.-S., Ci.	S.-Cu., Cu.	------	≡ a. ≤° p.
12	60.70	26.5	31.5	22.5	76.3	NW quad.	.8	.7	A.-Cu., Ci.	Cu.	------	
13	60.38	26.7	31.5	22.4	76	Variable	1	2	Ci.-S., Ci.	S.-Cu., Cu.	------	
14	60.91	26.4	31.4	22.5	78.2	N quad.	1.2	2	Ci.-S.	Cu.	------	
15	60.57	26.8	31.9	23.2	77.5	Variable	1	2.3	Ci.-S.	S.-Cu.	------	≡ a.
16	58.62	26.1	31.4	21.9	82.1	Variable	.8	2	Ci.-S., A.-Cu.	S.-Cu.	------	≡ Ω a. ∪ p.
17	57.20	28.4	34.5	22.9	52.1	NE	2.5	4.8	Ci.-S.	S.-Cu.	------	∈ p.
18	56.31	26.4	33.1	23.2	72	N quad.	2.2	9	Ci.-S.	S.-Cu.	------	≡ a. ◡ d° ☋ p.
19	57.21	26.4	31.7	22.5	81	N quad.	.8	7.2	Ci.-S.	S.-Cu.	6.3	≡ a.
20	59.12	26.8	31.5	23.4	84.5	Variable	1.2	7.7	Ci.-S., A.-Cu.	Cu.	------	● a. ≤° p.
21	59.50	27.2	33	24	84.2	Variable	.8	5	A.-Cu.	Cu.	------	≡ d a. ≤ p.
22	59.17	27.8	32.8	23.5	76	E quad.	1.2	7.5	Ci.-S.	S.-Cu., Cu.	------	≡ a. ≤° p.
23	59.26	27.2	31.5	23.5	76.3	N quad.	1.5	7.5	Ci.-S., A.-Cu.	S.-Cu., Cu.	------	∪° ☋ ≤° p.
24	59.88	27.6	32.9	23.8	74.5	E, NW	1.3	2.2	Ci.	Cu.	------	◠ p.
25	61.16	27.8	33	23.7	73.8	E	1.2	1.2	A.-Cu., Ci.	Cu.	------	⊏ ◠ d° ☋ p.
26	61.44	27.8	33.9	23.6	77.8	Variable	1.2	1.5	Ci.	Cu.	------	
27	60.33	27.8	32.5	24.4	76.4	Variable	.8	.8	Ci., A.-Cu.	Cu.	------	Ω a.
28	59.53	26.9	32.4	22.4	76.1	N quad.	1	.5	Ci.	Cu.	------	Ω a.
29	59.39	27.4	33.1	23.5	72	N quad.	1.2	0	Ci.	Cu.	------	☋ a.
30	58.88	27.7	33.6	23.3	68.5	Variable	.7	.7	Ci.	Cu.	------	☋ a.
31	58.24	28.3	33.1	24.2	73.7	Variable	.8	.7	Ci.	Cu.	4.6	d° ● p.
Mean	759.44	26.8	32.2	22.7	74.1	----------	1.2	2.5	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	10.9	

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[$\phi = 17°\ 36'$ N; $\lambda = 121°\ 40'$ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°C.	°C.	°C.	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.88	26.6	35	20.6	72.8	Calm		6.8		S.-Cu.	------	☊ a.
2	58.02	27	34.2	21.1	66	SE	0.5	3.3		Cu., S.-Cu.	------	☊ a. ☌ p.
3	58.19	25.6	33.5	19.4	72.7	NE	.7	3.5	Ci.	S.-Cu.	------	☊² ≡ a.
4	59.38	25.4	31.4	21.5	73.8	NE	1	6.3	Ci.-Cu.	Cu. NE	------	☊ a.
5	59.96	24.4	31.7	20.1	77.5	NW, N	1.3	5.3	Ci.	Cu. NE	------	☊ a.
6	61.07	24.6	30	20.2	80	NW	.8	6.2	Ci.	Cu. NW	------	☊ a.
7	60.99	24.3	30.7	18.6	72.8	N quad.	1.3	4.8	Ci.	Cu., S. N	------	☊² ≡° a. ☌° p.
8	61.84	24.4	29.4	20.3	75.5	NW	.5	7		Cu.-N. NE	------	☊ a. d p.
9	62.32	24.1	29.1	20.6	82	N	.5	8.3		Cu.-N.	------	d a. p.
10	62.34	25.1	32.1	21.5	80.2	NW	1	7.5	Ci.-Cu	Cu. SE	------	d a.
11	62.38	25.1	30.8	20.8	75.5	NE	.8	6.7	Ci.	Cu.-N SW, NE	------	☊ ⌒ a.
12	61.60	26.4	34	21.8	72.7	NW	.8	6.7		Cu. NE	------	☊ ⌒ a. d p.
13	61.78	25.4	29.5	21.5	74.8	Variable	.5	6.8	Ci.	Cu.-N. NE, SE	7.6	● p
14	61.79	25.5	31.8	19	72.7	SE	.5	5	Ci.	Cu. S	------	☊² a.
15	61.31	26.5	34	21	66.5	Variable	.5	6.7	Ci.	Cu.-N. S	------	☊° a.
16	59.90	25.3	32.1	19.2	68.7	NW	.7	6.7	Ci.	Cu. N	------	☊ a. ☋² p.
17	59.23	24.1	30	21.5	78.2	N quad.	2	8.8	Ci.-S.	Cu.-N. NE	2.8	☊ a. d p.
18	56.94	23.1	24.4	21.3	88 8	NW	2.3	10	Ci.	N., Cu.-N. N	16.5	● a. p.
19	57.04	25.9	34.1	21.2	80.3	Variable	.5	8.2	Ci.	Cu. SE	1.8	● a.
20	58.86	27.2	34.5	23.2	79.6	NW	.7	7.3	Ci.	Cu. SE	------	● a. ⊤ ≲ ☋ p.
21	59.27	27.9	36	22.8	78.5	NW	.8	6	Ci.	Cu., Cu.-N. S	------	☊ a.
22	59	27.7	35.9	24	74.7	SE	.7	6.7	Ci.	Cu. S	------	⊤ ≲ p.
23	59.64	26	32.8	22.2	81.8	NW	.7	7.5	A.-Cu.	Cu. NW, N	27	☊² a. ⊤ ● ◪ p.
24	61.15	25.5	31.5	22.3	84.9	Variable	.5	8.5	A.-Cu. NE	Cu. NE, NW	14.5	☾² ● ◪ p.
25	62.32	26.7	33	22.3	81.3	SE	.2	7.5	Ci., Ci.-S.	Cu.-N. SE	------	⊤ d p.
26	62.34	27.3	34.5	22	72.5	SW	.8	2.8	Ci.	Cu. SE	------	☊² a. ☌ p.
27	61.34	27.5	34.2	23.7	67	SE	.2	.2		S.	------	☊ a.
28	60.63	27.8	35.2	19.7	64.8	SE	.3	.5		Cu.	------	☊² a. p.
29	60.10	27.3	35.1	20.5	68	SE	.5	1.3		Cu. SE	------	☊² a.
30	59.56	27.5	34.1	20.3	71.5	SE	.7	2.2	Ci.	Cu. SE	------	☊² a.
31	59.06	28.1	35.3	22	67.8	ESE, SE	.3	4.3	Ci.	Cu. S	------	☊ ☩² a. ⊤ p.
Mean	760.27	26	32.6	21.2	75		.7	5.8				
Total											70.2	

APARRI.

[$\phi = 18°\ 22'$ N; $\lambda = 121°\ 38'$ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

	mm.	°C.	°C.	°C.	*Per ct.*		*Km. p. h.*	*0–10.*					*mm.*	
1	759.33	25.7	29.6	22.9	80.5	Variable	9.5	4.7	A.-Cu.	W	Cu.-N.	E, SE	------	☌ a. p.
2	58.14	25.7	30.6	22	76.8	Variable	10.9	0					------	☌ a. p.
3	58.92	24.6	29	21.1	78.8	N	12.8	2.7			Cu.-N.	NE	------	☊ a. ☌ a. p.
4	60.12	24.6	27.8	23	72.5	NE	18	8.8	A.-Cu.	W	Cu.-N.	ENE	------	
5	60.80	23.1	25	21.6	85.5	NE	12.3	9.2	A.-Cu.	W	Cu.-N.	ENE	6.6	● a.
6	61.81	24.3	27.7	22.2	71	NE, N	11.1	6			S.-Cu.	ENE	.5	●° p. ☌ a. p.
7	61.66	23.4	28	19.6	79.2	N quad.	12.9	3			S.-Cu., Cu.-N.	NE	------	☌ a. p.
8	62.22	24.2	27.2	22.2	78.3	NE	15.1	4.3			S.-Cu.	NE	1	●° a.
9	62.84	22.5	27	19.7	86.8	E quad.	11	10			S.-Cu.	E	.6	●° a.
10	63.04	24	27.6	21.6	80.8	NE quad.	12.2	8.5	A.-Cu.	W	S.-Cu.	E, ENE	------	
11	63.04	23.5	26.8	20.9	84.2	ENE, E		8.2			S.-Cu.	E	1.3	● a.
12	62.16	24.7	28.5	21.6	79.7	NE quad.	9.1	7.3	A.-Cu.	S, W	S.-Cu.	E	------	
13	62.20	23.9	27	21.4	79.2	E	13.9	8	A.-Cu.	S	S.-Cu.	E	------	
14	62.04	24	28.8	19.1	76.2	SE, E	11	4.7	Ci.	S	Cu., Cu.-N.	SE	------	
15	61.55	24.9	29.9	21.2	74.3	E quad.	13.1	.8			S.-Cu.	SE	------	☌ a. p.
16	60.54	24.3	29	18.6	77.2	E quad.	11.8	2.3	Ci.	S	S.-Cu.		------	☊ ≡° a.
17	60.34	24.5	27.5	22.2	74.2	NE	20.4	9	A.-Cu.	SW	S.-Cu.	E, NE	3.6	●° p.
18	58.09	23.5	24.4	22	89.2	NE	23.4	10			N.	NE	24	●° a. p.
19	57.22	24.6	27.3	21.6	86.2	NW		10	Ci.	E	S.-Cu.	W	------	☾ a.
20	59.40	25.1	29.1	22.8	88.5	NW quad.	8.2	7.3	A.-Cu.	S	S.-Cu.	W	------	≲ p.
21	59.71	25.9	31	22.5	86.2	Variable	7.4	4.3	A.-Cu.	S, SW	S.-Cu.	N	------	☌ a. p. ⊤° ≲ p.
22	59.32	25.5	31.9	22.7	87.7	SW quad.	9.5	6.2	A.-Cu.		S.-Cu.	SW	.5	☊ a. ⊤° ● ° p. ☌
23	60.17	24	27.5	22.5	89.2	NW quad.	8.9	9.2	A.-Cu.	SW	S.-Cu.	N	8.9	●° a. p.
24	61.80	24.2	27	22.1	88	NE	14.4	8.8			S.-Cu.	NE	23.4	● a.
25	62.47	25.9	30.9	22	79.3	S	8.8	2.8	Ci.-S.		Cu.-N.	SE	------	
26	62.34	25.9	31.1	21.9	78	SE, E	11.8	2	A.-Cu.		S.-Cu., Cu.-N.		------	☊ a.
27	61.31	25.7	30.5	21.2	72	SE, S	14	0					------	☌ a. p.
28	60.86	25.5	30.9	20.1	74	SE, S	14	1.7	A.-Cu.		S.-Cu.		------	☌ a. p.
29	60.34	26.2	31.4	21.1	72.5	SE quad.	12.8	0					------	☌ a. p.
30	59.76	26.6	30.7	22	76.3	E quad.	11.9	1.7			Cu.-N.	E	------	☌ a. p.
31	59.16	26.8	31.3	23.3	77.4	E quad.	13.6	1.5	Ci.	W	Cu.-N.	S	------	☌ a. p.
Mean	760.73	24.8	28.8	21.6	80		12.5	5.3						
Total													70.4	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct	0–10.	0–10.	mm.	
1	30.3	21.3	94	90	8	10	1.3	☊ ≡ ☐ ☿ d° a. ● °
2	30.7	20.8	96	74	10	8	15	≡ a. ☐ ☿ ² ● p.
3	30.2	21.1	96	71	8	8	------	
4	31.4	21.3	96	75	8	10	------	☊ ≡ ° a.
5	32.5	21.3	96	------	8	8	------	≡ a.
6	31.9	21.4	97	73	10	10	------	≡ a.
7	31.8	19.9	97	65	9	9	------	
8	32.5	21.9	88	65	10	5	------	≡ ° a
9	31.7	22.5	92	77	7	7	------	☾ p.
10	32.6	22.8	96	73	10	8	------	d° a. ☐ ☿ p.
11	32.5	21.5	96	66	7	6	------	≡ a.
12	31.4	23.4	83	69	10	10	------	≡ a. ☾ ² p.
13	32.3	21.5	95	70	9	10	------	p p.
14	31	21	95	68	9	10	------	
15	31.8	20.3	95	64	7	10	------	≡ a.
16	31.3	22.3	92	65	6	6	------	≡ ° a. ∪ ² p.
17	31.5	21.3	95	63	6	6	------	☙ ° p.
18	32.2	21.4	94	65	6	7	------	≡ ° a.
19	32.2	20.9	90	83	5	10	25.7	● a. ☙ d p.
20	32.3	20.5	96	75	10	10	------	≡ ° a. ☙ p.
21	31.3	21.7	95	70	8	8	------	☊ ≡ a.
22	32.5	21.8	96	84	8	10	1.8	☊ ≡ ● a. ∪ ² p.
23	32	21.6	96	70	8	9	------	☊ ≡ d a.
24	30.8	20.3	95	86	6	10	18	☊ ≡ a ● ☙ ² p.
25	31.8	22.3	94	71	10	10	3.6	☊ ≡ ⌒ ² a. ● ☾ ² p.
26	31.8	22.1	95	77	8	7	------	☊ ≡ a. ☙ ² p.
27	31.4	21.4	87	71	7	8	.5	☊ ≡ a. p p.
28	31.4	21.8	96	65	8	6	------	☊ ≡ a. ☾ ∪ ² p.
29	31.7	21.5	89	77	5	8	10.7	☊ ≡ a. ● ² p.
30	31.8	22.5	97	74	8	10	------	☊ ≡ a. ☐ ☿ ² p.
31	31.8	22.6	87	84	8	10	4.1?	≡ a. ● ² ☐ ☿ p.
Mean	31.7	21.5	93.7	72.7	8	8.5	------	
Total	------	------	------	------	------	------	80.7?	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	22.8	96	87	4	10	------	☊ p° a.
2	31.8	21.5	96	78	1	9	------	☊ a.
3	31.3	22	91	78	2	7	------	☊ a.
4	30.3	22.5	96	83	5	9	------	☊ a.
5	33.8	21.5	96	75	6	3	------	☊ ≡ ° a.
6	30.8	21	96	81	6	9	------	☊ ≡ ° a.
7	32.8	21.5	96	71	4	5	------	☊ a.
8	33.3	21.5	95	72	2	4	------	☊ a.
9	32.8	22	96	80	3	9	0.5	☊ ° a. ┬ p.
10	34.8	22.5	96	72	9	9	------	☊ ° a. ┼ p.
11	32.8	23	91	74	9	10	------	
12	33.8	22	93	69	9	6	------	☊ ° a.
13	31.8	22	91	74	9	10	17.5	● p.
14	30.8	21.2	96	78	10	9	------	● a.
15	30.8	20.2	94	77	10	10	------	☊ a.
16	30.3	20.6	95	77	4	9	------	☊ a.
17	30.3	21	96	77	4	9	------	☊ a.
18	30.3	20.4	96	71	6	7	------	☊ a.
19	30.8	21	96	77	5	10	.5	☊ a. d ☾ p.
20	28.8	21.5	91	80	10	10	22.4	☊ ● ☐ ☿ a.
21	29.8	22	97	72	9	6	.5	☊ a. d ☐ ☿ p.
22	29.3	21.5	97	97	9	10	8.6	☊ ● ☐ ☿ a. d p.
23	29.8	21.5	96	88	9	5	35.8	┬ a. ● a. p.
24	30.8	21.5	96	85	3	10	8.9	☊ ≡ ° a. ● p.
25	30.2	21.5	96	78	2	5	12.4	≡ ° a. ☐ ☿ ● p.
26	30.3	21	97	85	1	10	------	≡ ° a.
27	33.8	21.9	96	81	4	5	------	☊ a.
28	31.3	22	96	76	1	4	------	☊ a.
29	33.1	22	96	66	9	4	------	☊ a.
30	33	22.3	97	62	1	5	22.9	☊ a. ● ☐ ☿ p.
31	32.3	22.5	97	77	10	9	------	☾ p.
Mean	31.5	21.7	95.3	77.4	5.7	7.6	------	
Total	------	------	------	------	------	------	130	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	23.5	91	58	9	9	------	
2	31.4	22.5	89	64	3	8	------	
3	29.8	22	80	81	1	8	------	☐ ☿ p.
4	29	23	83	78	3	3	------	≡ a.
5	32.1	22.5	89	65	2	9	------	
6	29.1	22.5	88	77	9	9	------	
7	31.3	21.3	90	68	9	8	------	☊ ≡ a.
8	31.5	21.3	89	66	3	3	------	☊ ° ≡ a.
9	31.1	22	83	67	7	6	------	☐ ☿ p.
10	32.3	23	85	66	9	9	------	d° ┬ p.
11	30.4	23.8	88	71	6	9	------	┬ p.
12	32	22	85	67	8	9	------	☊ ° ≡ a.
13	31.8	23.5	84	63	8	9	------	☾ p.
14	29.7	22.8	84	73	9	8	------	
15	30.8	20.9	87	61	9	9	------	☊ ° ≡ a.
16	31	21.5	87	77	8	9	------	☊ ° ≡ a. ○ p.
17	28.9	21.5	86	71	4	3	------	☊ ≡ ° a.
18	29.5	22	85	71	3	5	------	☊ ° a. ○ p.
19	30.6	22.5	84	64	3	8	------	☾ p.
20	30	22.3	85	77	9	9	2.5	≡ ┬ a. p p.
21	30	22.2	86	73	4	3	------	
22	29	22.7	85	86	9	9	2	● ° p.
23	30	22.4	96	71	10	3	------	☾ ● ° a.
24	31	23	82	71	3	1	2	∪ p.
25	29.6	22.9	88	77	3	3	16.3	● a. ☐ ☿ a. p.
26	29.9	21.5	95	79	6	10	------	≡ d° a.
27	32.4?	24	88	76	5	3	------	
28	32.5?	23.5	84	72	3	4	------	∞ ┬ p.
29	32.2	23.5	87	56	3	3	------	
30	31.5	23.4	86	78	2	5	------	☐ ☿ p p.
31	31.4	23.9	87	80	7	9	2.3?	
Mean	30.8	22.6	86.6	71.1	5.7	6.5	------	
Total	------	------	------	------	------	------	25.1	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.1	21.7	96	75	9	8	------	
2	32.2	21	95	55	6	5	------	
3	31.9	20.6	95	60	6	6	------	
4	33.5	21.8	96	64	5	6	------	
5	32.7	20.5	95	59	5	6	------	
6	32.7	19	93	61	5	7	------	
7	33.9	17.9	93	53	5	5	------	
8	34.2	20.5	93	48	5	6	------	
9	31.5	22	91	67	5	7	------	
10	27.8	21.8	95	90	8	10	14.2	d a. ● p.
11	32.6	21.4	95	59	9	6	------	
12	32.6	20.5	91	54	5	6	------	
13	30	20.4	94	73	5	10	31	● p.
14	31.7	19	92	62	7	6	------	
15	31.1	21	94	66	5	7	------	
16	32.3	21.3	96	55	6	5	------	
17	32.7	20.5	95	63	5	5	------	
18	33.7	20.4	95	53	6	5	------	
19	33.5	21	96	63	6	6	------	
20	26.6	22.9	96	91	10	10	------	d a. p. ☙ p.
21	33.2	21.9	96	73	7	5	7.6	● a.
22	26.5	22.1	97	85	6	9	25.9	● p.
23	32.6	20.5	98	65	7	5	------	
24	32.6	22.6	96	66	6	5	15.2	● ┬ p.
25	32.2	22.1	97	72	6	8	10.7	● p.
26	28.6	21	98	76	10	7	5.1	● p.
27	33	21.2	96	68	6	6	------	
28	31.8	22.1	92	72	6	7	------	
29	31.7	21.8	97	72	5	8	------	
30	26.9	22.2	96	95	9	10	37.6	● a. p.
31	31	21.5	97	82	7	8	25.9	● ┬ p.
Mean	31.5	21.1	95	67.6	6.4	6.8	------	
Total	------	------	------	------	------	------	173.2	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[$\phi = 7°\ 13'$ N; $\lambda = 124°\ 15'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	21	93	67	8	10	------	☊ a.
2	32.3	21	93	51	3	2	------	
3	33	21.6	93	54	2	3	------	☊ a. ☾ p.
4	33.2	21.8	92	60	4	5	------	
5	32.8	21.4	93	52	4	6	------	
6	31.5	21.2	93	58	3	4	------	☊ ≡° a.
7	33	19.2	93	58	3	2	------	☊ a.
8	32.4	20.4	94	55	1	8	------	☊ a.
9	------	20.7?	93	62	10	10	3	● ⊤ ☾ p.
10	29	------	93	78	2	10	------	≡ a. ☌ p.
11	32.1	21	85	67	10	10	------	☾ p.
12	34	21.6	95	60	8	10	------	
13	31.6	20.1	90	65	4	6	------	
14	32.6	21.2	91	66	2	8	------	☊ a.
15	31.4	20.4	93	66	2	5	------	☊ ≡° a.
16	33	21.1	94	61	2	4	------	≡ ☊ a. ☾ p.
17	33.4	21.3	93	60	2	4	------	☊ a.
18	32.6	19?	93	63	1	3	------	≡ ☊ a.
19	32.8	20.1	93	55	4	3	------	☊ a.
20	32.1	20.4	85	65	4	8	2.5	☾ ●° p.
21	------	20.4	91	55	4	3	------	☊ a. ⊤ ● ☾ p.
22	28.1	20.1	93	73	10	10	------	≡ a. ⊤ ●° ☾ p.
23	32.8	21.1	93	58	5	2	------	d a. p.
24	35	23.2	94	58	8	3	3	☊ a.
25	------	20.6	90	66	2	10	13	⊤ ● p.
26	32.4	21	91	76	10	10	------	☊ a. ⊤ ● p.
27	32.7	21.1	94	62	2	2	------	≡² d a. ☾ p.
28	35.1	22.2	95	49	3	8	5.1	≡ ☊ a. ☾ p.
29	33.8	21.6	93	50	2	9	2	≡ a. ● p.
30	34	21.5	91	61	10	7	------	☋ a. ●° p.
31	32.8	21.4	92	61	10	10	8.9	☾ p.
								☈ ● p.
Mean	32.6	21	92.2	61	4.7	6.3	------	
Total	------	------	------	------	------	------	37.5	

CAGAYAN, MISAMIS.

[$\phi = 8°\ 29'$ N; $\lambda = 124°\ 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	20.9	93	67	8	9	------	☋² ≡° a.
2	32.2	19.7	93	63	4	6	------	☋² ≡ a.
3	31	19.8	90	62	4	4	------	☋² ≡² a.
4	32.3	20.2	93	61	2	8	------	☋² ≡ a. ⊕ p.
5	31.8	20.2	92	64	1	3	------	☊ ≡ ◡ a.
6	31.9	19.3	89	59	2	5	------	☊ a.
7	32.5	20.3	84	53	8	6	------	☋° ≡° a.
8	32.7	19.4	78	57	4	4	------	
9	30.9	20.4	82	75	2	9	------	☋° a.
10	31.7	20.9	92	60	8	8	------	
11	32.7	20.5	92	64	9	9	------	☋° a.
12	32.5	20.5	90	55	2	8	------	☋° a.
13	30.9	20.5	91	59	5	9	------	☋° a.
14	31.5	20.6	90	59	9	9	------	
15	31	21.7	92	62	9	9	------	
16	31	23.4	85	69	10	10	1.3	d° a.
17	34.3	20.1	85	50	3	4	------	☋² ≡ a.
18	34.7	21	90	54	0	4	8.9	☈° p² p.
19	31.2	20.9	91	72	7	9	------	⊤° d° p.
20	31.8	22.7	91	70	10	10	2.5	d a. p.
21	30.4	22	83	67	2	10	24.1	● p.
22	29.3	22.9	90	79	10	10	------	● d° a.
23	32.4	21.4	92	65	0	4	------	☋² ≡ a.
24	33.2	21.7	92	64	0	2	------	☋² ≡° a.
25	34	22.7	94	56	0	4	------	
26	33	21	89	72	9	10	1.3	☋ ☾ ◡ a. d° a. p.
27	32.4	20.9	88	71	6	7	------	☋ ☋° a.
28	33.5	21.7	92	66	4	7	------	☋ ≡° a.
29	34.3	21.4	87	57	4	7	------	☋° a.
30	32.8	21.3	85	67	3	9	------	
31	33.2	23.4	90	77	5	9	------	☋° a. ⊤ d.
Mean	32.2	21.1	89.2	63.7	4.8	7.2	------	
Total	------	------	------	------	------	------	38.1	

BUTUAN.

[$\phi = 8°\ 56'$ N; $\lambda = 125°\ 32'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.5	21.4	96	77	8	8	------	☋² a. ⊕ p.
2	28.5	21.5	96	87	5	9	5.4	☋² a. ● p.
3	29.1	22	96	70	4	9	.8	☋ a. ●° ⊤ p.
4	28.8	22.4	96	70	6	8	------	☋² ≡² a. ⊕ a. p.
5	29.6	20.3	93	59	10	8	------	☋² a. ⊕ p.
6	28.6	20.1	99	58	10	8	------	☋² ⊕ a. ⊕² p.
7	28.5	21	95	61	7	7	3.6	☋ a. d ● p.
8	30.5	22	95	67	4	7	1.8	●° a. p.
9	28.6	22.5	96	70	7	9	.5	☋ ● a. ●° p.
10	29.4	22.3	95	65	7	7	------	☋ a. ⊕ a. p.
11	28.7	21.6	96	66	7	9	2	☋ ∞ a. ● p.
12	29.6	21.9	95	64	5	9	.3	d a.
13	27.2	21.5	95	77	9	9	.8	☋² a. ● p.
14	28.5	21.6	95	70	10	10	18.5	☋ a. ● d p.
15	26.1	22.5	93	81	10	10	------	● a. ⊕ ☾° p.
16	28.1	21.2	95	73	9	9	------	☋² a.
17	30.1	21.1	95	55	7	4	------	☋² a. ☈ p.
18	29.7	21.3	95	74	4	4	------	☋ a. ⊤ ◠ ● ☾ p.
19	31.5	23	91	80	4	8	3.6	☋ a. ∞ ● d ● p.
20	30.1	22.7	91	88	9	10	8.7	● ∞ ⊕ a. ⊤ d ● p.
21	31	22.7	98	88	8	9	15.5	● a. p. ⊤ p.
22	27.9	22.4	94	90	9	10	12.2	● a. p.
23	31	22.9	96	85	6	7	2.5	☋² a. ● ◠² p.
24	32.6	22.7	92	65	6	7	2.8	☋ a. p° ☈ p.
25	30.2	22.4	95	82	2	6	7.2	● a. p.
26	27.1	22.5	96	76	9	10	11.5	☋ a. ● a. p.
27	30.3	22.9	91	72	8	6	4.1	●° a. ● p.
28	29.3	23.1	95	76	2	8	1	☋² a. ● p.
29	30.3	23.2	93	64	5	8	.8	● a.
30	29.3	23.1	95	90	7	10	13	☋ p° a. ⊤ ● p.
31	28	22.8	96	90	9	9	6.6	● a. d° p.
Mean	29.2	22.1	94.8	73.9	6.9	8.1	123.2	
Total	------	------	------	------	------	------	------	

YAP (WESTERN CAROLINES).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	24.5	89	89	8	8	3	☋ a. ● d a. p.
2	30.2	23	82	68	7	8	------	☌ ∞ ◡ p.
3	31.8	23.6	70	57	3	1	0.5	☋ ☋ a. ∞ ●° p.
4	30.4	23.9	94	70	2	8	------	d° a.
5	30.2	24	84	70	5	7	1	
6	30.7	23.8	92	66	6	6	------	● a.
7	31.3	24.4	80	66	9	9	4.3	● p.
8	30.2	23.6	99	73	6	7	2.5	● a.
9	31	25	82	65	6	5	.3	◯² p p.
10	31.5	24.2	80	66	9	9	------	d° p.
11	30.3	23.2	78	68	7	8	------	
12	30.7	22.3	71	61	10	10	27.4	d° ●° p.
13	28.5	23.8	97	84	10	10	9.4	● ⊕² a. d a. p.
14	29.4	24.2	92	90	9	10	35.3	d° ● a. p.
15	30.1	24.8	96	80	10	8	15.5	● d a. p.
16	30.3	24.1	95	76	9	8	------	◯² ⊕° a.
17	31.7	23.8	93	73	7	8	5.4	●° a. p. ◡² ☋ p.
18	27.9	23.9	97	93	8	10	24.9	● a. p. ⊥ ☋° p.
19	29.9	24	88	70	7	8	.3	● a. d° ☾² ◡ p.
20	30.2	25.1	84	70	4	4	------	d° ∞° ☾² ☋° p.
21	31.4	24.6	88	81	6	8	9.1	○° ∞° a. ● ◠° p.
22	31.1	24.8	90	71	9	4	.3	☋ p.
23	31.7	24.4	96	68	7	7	.3	●° a. p. ☋ p.
24	30.6	24.6	90	75	6	6	.3	●° a. ☾ ☋ d° p.
25	31	25.1	92	70	4	3	3	● a. p. ☾° ☋ p.
26	31.3	24.5	84	76	5	4	1.8	● ☾° ☋² d° p.
27	31.2	24.9	85	71	4	4	.3	d ☋ p.
28	31.5	25	85	70	5	3	.3	●° ☋² p.
29	31.2	25.1	84	71	5	5	------	d° a. p. ◠° p.
30	31.6	25.2	84	76	6	7	1.3	◡ a. ● d° ☾° p.
31	31.2	25.2	93	76	8	8	3.6	d ◠° ● a. d° p.
Mean	30.7	24.3	87.5	72.9	6.7	6.8	------	
Total	------	------	------	------	------	------	150.1	

METEOROLOGICAL DATA, ETC.—Continued.

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	21.4	88	74	10	10	6.6	p a.
2	29	22.4	95	83	10	10	------	
3	28.6	22.6	91	------	10	10	------	☽°da. ☌☍² ◟°p.
4	29.6	22	87	74	10	10	------	
5	30.5	21.6	92	64	10	10	------	☌☍² p.
6	31	21.6	95	75	10	10	------	d p.
7	29.5	20.7	91	76	10	7	------	☌☍² p.
8	28	22.4	95	90	10	10	------	☽ d a. d° ☌☍² p.
9	28	22.4	90	81	10	10	------	
10	29.5	22	88	66	10	10	------	
11	31	21.5	91	73	10	10	------	
12	30	22.3	92	77	10	10	------	d ☌☍² p.
13	28.5	22	86	73	10	10	------	d a. p. ☰° p.
14	28.6	21.6	84	80	10	10	3.3	☽° a. p p.
15	28.6	21.5	90	72	10	10	------	d ☌☍² p.
16	29.5	24	83	82	10	10	------	☰ a. d a. p.
17	27.6	22.4	92	83	10	10	------	◟☍² ⊰ p.
18	29.4	23.6	87	81	10	7	------	☾ ◟° p.
19	31.1	22.1	96	81	6	8	------	
20	29.4	24.3	91	83	10	8	------	◟ ☾ d p.
21	30.6	23.1	95	70	10	7	------	☌☍² ☿☍² ◟° p.
22	30.7	23.8	87	82	10	10	9.1	d°a. p. p ◟☍² ☿p.
23	29	22	96	77	10	4	------	
24	31.6	22.4	91	67	6	3	------	
25	31.6	23	83	75	4	5	3	● ☽² ◟ ♅☍² p.
26	31	23.4	91	77	10	10	10.2	● d ☽° ♅☍² ☾ ◟ p.
27	30.4	22.6	88	71	10	7	20.8	☰☍² ● a.
28	30.9	23	92	62	10	7	------	d ☰☍² a. p. ☽² p.
29	31	23	89	71	8	9	------	d ☰ ☽° a.
30	30.8	23.1	91	79	10	10	------	d ☰ a. p.
31	29.5	23.6	91	84	10	10	31.5	● a.
Mean	29.8	22.5	90.3	76.1	9.5	8.8	------	
Total	------	------	------	------	------	------	84.5	

SAN JOSÉ BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	20	89	65	1	3	------	
2	32.1	21.8	94	66	7	10	------	
3	33.4	22	89	64	3	10	------	⊤ p.
4	33.1	23.5	83	70	8	10	------	⊤ p.
5	32.9	21.3	82	61	4	3	------	⊤ p.
6	32.6	21	82	64	4	10	------	⊤ d p.
7	32	21.6	85	75	10	10	2.3	● p.
8	30.1	22.5	94	85	10	10	1.3	● ⊤ d p.
9	32	22	89	72	2	8	------	d a. p.
10	32	21.6	91	84	10	10	6.4	♌ a. ● ⊤ p.
11	32	20.4	90	60	8	2	------	♌ a.
12	32.9	21.6	82	59	3	4	------	
13	31.8	21.2	88	61	10	10	------	
14	32.6	21	77	60	7	10	------	
15	31.7	22	70	57	10	10	------	
16	30.7	21.1	86	62	10	10	1.5	
17	32	23.6	86	48	10	10	------	● a. d p.
18	31.1	22.8	86	68	3	10	13	● p.
19	30.5	21.7	92	72	3	3	------	◟ p.
20	31	21.9	82	74	8	10	3.3	d a. p. ⊤ ●° ◟ p.
21	29.4	22.6	92	78	4	10	12.2	d° ● ⊤ p.
22	31.3	22.3	91	88	2	10	3.3	d ⊤ ●° p.
23	31.5	21.7	92	69	3	4	------	d ⊤ a. ●° p.
24	32.6	22.5	90	66	2	4	------	◟ p.
25	34.1	22.1	91	56	1	4	------	d p.
26	33.4	21.7	86	55	3	8	------	
27	35.6	22	82	59	10	7	------	
28	35.3	21	86	50	1	3	------	◹ d° p.
29	34.6	22.1	83	57	0	3	------	
30	33.9	22.3	82	55	1	3	------	◹ d p.
31	33.6	23.8	89	61	4	10	------	◟° p.
Mean	32.4	21.9	86.5	65.2	5.2	7.4	------	
Total	------	------	------	------	------	------	43.3	

BORONGAN.

[$\phi = 11°\ 37'$ N; $\lambda = 125°\ 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.2	21.5	97	79	6	10	31.7	♌ ☰ a. ● a. p.
2	30.1	20.6	95	70	10	4	4.6	● a.
3	30.6	22.3	97	74	6	5	------	● ♌ ☰ a.
4	30.9	23.5	96	73	4	2	------	♌ ☰ a.
5	30.5	20.6	97	68	3	4	------	♌ ☰ a.
6	30.6	21.2	97	78	5	8	3.6	♌ ☰ a.
7	30.2	20.9	97	71	10	6	13.7	☰ a. ● a. p.
8	28.1	22.7	96	85	10	9	10.4	● a. p.
9	29.6	22.9	97	78	10	8	24.2	☰ a. ● a. p.
10	29.9	23.3	96	64	8	6	.8	● a. p.
11	29.5	21.7	97	71	10	9	47.8	☰ a. ● a. p.
12	29.3	21.9	97	84	9	10	26.1	●² ☰ a. ● p.
13	29.7	22.3	95	69	10	8	6.4	● a.
14	27.2	21.2	97	78	10	10	2.8	☰ a. ● a. p.
15	27.7	21.4	96	72	10	10	39.1	☰ a.
16	26.1	22.5	97	93	10	10	19.8	● a.
17	28.1	22.2	98	73	10	10	2.6	●° a. p.
18	29.9	22.8	96	76	9	7	27.4	●°a. ◹ ●² ◟ p.
19	31.3	21.9	96	75	6	8	7.4	♌ a. ◸ ☾ ○ ● p.
20	31.1	23	96	76	10	8	3	● ○ a. ☾ p.
21	30.6	22.8	96	77	8	9	15.7	☰ a. ● a. p.
22	29.7	24.1	93	86	8	6	2	● a. ●° ☾ p.
23	30.2	22.8	96	75	10	8	14.2	● a.
24	29.5	22.9	94	78	6	8	3.5	●² ☰ a.
25	30	23.1	92	74	9	8	11.2	● a.
26	31.1	23.7	88	70	7	8	2	●² a.
27	31.8	23.6	88	72	5	6	.5	● ☰ a.
28	30.4	23.8	86	81	8	6	18.3	● a. p. ◟ p.
29	29.9	23.9	86	77	5	7	18.3	● a. p.
30	28.9	23.7	92	94	9	10	18.3	● a. p.
31	30	23.6	86	79	10	9	9.2	● a. p. ◟ p.
Mean	29.7	22.5	94.4	76.5	8.1	7.6	------	
Total	------	------	------	------	------	------	384.6	

MASBATE.

[$\phi = 12°\ 22'$ N; $\lambda = 123°\ 36'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	22.6	97	73	8	9	2	
2	31	23.8	98	78	8	9	1.5	
3	31.6	22.2	98	71	6	7	------	
4	30.8	24.6	------	72	9	8	------	
5	31.8	23.2	99	68	9	7	------	
6	31.2	23.8	97	76	10	9	.5	
7	28.8	23.4	97	88	10	9	5	
8	26 6	23.8	98	100	10	10	21.6	
9	27.4	22.6	98	100	10	10	23.6	
10	30	22.6	98	78	10	8	------	
11	31.2	22.6	------	------	9	8	------	
12	30.2	23.5	98	------	9	9	------	
13	30.5	23.5	95	------	10	8	1.5	
14	29.6	22.4	97	97	9	10	.3	
15	28.8	23.2	90	81	10	10	------	
16	25.2	24.4	92	98	10	10	11.4	
17	26.4	22.4	100	100	10	10	51.3	
18	28.5	23	98	89	10	9	15.2	
19	29.5	22	97	92	7	9	.3	
20	30.8	23.5	98	79	8	8	------	
21	31.8	23.6	97	69	8	7	.5	
22	31.2	24.2	97	88	8	9	------	
23	31	23	98	------	7	8	------	
24	31.6	24	98	------	7	6	------	
25	32.2	24.2	97	------	7	6	1.3	
26	31.6	24.4	97	------	9	6	2.5	
27	31.5	24	93	72	8	8	------	
28	31.5	24.2	96	73	6	5	1.3	
29	32.4	24.6	98	68	6	4	------	
30	32.5	24.5	------	99	8	10	2.1	
31	32.4	24.8	------	76	8	7	3.3	
Mean	30.3	23.5	96.9	82.7	8.5	8.2	------	
Total	------	------	------	------	------	------	145.2	

METEOROLOGICAL DATA, ETC.—Continued.

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.7	24.3	80	62	10	6	7.1	● p.
2	29.2	23.6	91	78	10	5	1.8	d a. ●° a. p.
3	31.6	23.2	97	62	8	3	------	
4	31.2	24.1	87	65	8	2	------	
5	31.2	23.7	87	66	9	7	1.3	◟ p.
6	29.5	23.9	97	69	9	9	19.8	p a. ●² p.
7	29.2	23.6	91	69	7	9	.8	● a.
8	30.6	24.2	84	68	10	5	.5	p a. d a. p. ◟ p.
9	30.1	24.2	83	72	10	10	15.2	d a. ● p.
10	29.6	23.2	83	67	10	6	------	◟ p.
11	30	24.2	81	67	7	8	3.8	◟ p.
12	30	23.5	87	69	9	6	1	p a. ●° p.
13	30.4	23.4	89	63	10	5	.8	d° a.
14	30.4	23.5	83	64	10	9	------	p a. ◟ p° p.
15	30	22.8	77	61	9	9	------	
16	27	24.1	77	74	10	10	------	d° a. d p.
17	25.8	23.1	80	93	10	10	57.2	☂° d a. ● a. p.
18	31.1	22.8	91	66	10	7	------	
19	30.8	23.5	94	71	4	4	------	
20	30.8	23.2	96	80	9	9	9.4	● a.
21	30.7	23.5	92	76	3	9	10.7	●° a. ☋ ◟ p.
22	30.2	23.5	93	72	7	9	9.1	● a. ●° ☋ ◟ p.
23	30	23.2	92	83	10	7	39.9	● a. p. ☋ p.
24	30.5	23.7	89	71	9	7	------	●° a.
25	31.2	25.1	80	64	3	1	------	◟ p.
26	29.9	24.2	79	72	7	8	2	●° a.
27	31	25	80	63	7	7	.5	●° p.
28	30	24.4	84	64	10	10	8.9	p° ● p.
29	30.6	24.3	84	70	9	6	.5	d a. ◟ p.
30	31.3	25	84	69	7	4	1.5	●° ◠ ◟ p.
31	31.5	25	84	73	9	9	2.5	d ◠ a. ◟ p.
Mean	30.2	23.8	86.3	69.8	8.4	7	------	
Total	------	------	------	------	------	------	194.3	

LAOANG.

[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.0	19.9	93	76	8	8	9.4	
2	28.4	22.6	97	80	8	9	16	
3	29.2	20.9	95	80	9	7	.8	
4	29.6	21.8	92	70	5	3	------	
5	30.6	22.4	90	59	4	4	------	
6	29.3	22	92	82	8	9	8.9	
7	28.9	22.2	98	84	9	7	5.1	
8	27.7	22.8	97	85	9	9	31.8	
9	28.6	22.7	97	85	8	9	10.7	
10	29	23.3	87	66	7	5	------	
11	29.3	21.2	96	66	7	8	5.1	
12	28.6	21.4	88	78	8	7	------	
13	29.2	22.5	81	76	8	7	2.3	
14	29.2	22.3	77	68	9	8	1.5	
15	28.4	23.6	74	70	7	10	26.9	
16	24.5	22.3	97	97	10	10	276.6	
17	28.9	21.1	97	91	10	10	33.3	
18	28.4	21.6	96	81	10	10	2.5	
19	31.2	21.7	91	68	2	7	------	
20	31.4	22.9	93	74	6	7	------	
21	29.8	22.5	96	76	6	8	2.5	
22	28.8	------	91	70	6	9	4.8	
23	30.7	21.7	90	76	5	6	7.6	
24	29.3	22.5	93	79	8	6	5.3	
25	29.6	21.4	94	73	7	6	10.9	
26	30.1	22.7	97	69	6	7	1.5	
27	29.8	23.7	94	74	7	6	1.8	
28	29.7	24.1	92	75	6	7	12.1	
29	29.9	23.8	88	75	6	7	.8	
30	30.1	24.2	92	81	8	9	.8	
31	29.6	23.4	90	78	8	9	9.4	
Mean	29.2	22.4	91.8	76.2	7.3	7.5	------	
Total	------	------	------	------	------	------	488.4	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	23.4	94	84	7	9	3	● p.
2	28.9	23.8	97	88	10	10	6.6	p a. p.
3	31	20.8	99	88	7	5	------	
4	32	25.2	98	80	7	4	------	
5	31.8	25.2	95	77	7	6	------	
6	31.6	23.6	86	81	4	6	1.3	p p.
7	30.1	23.4	91	87	7	9	2.3	d ●° a.
8	28.7	22.8	97	89	8	10	9.7	p² a. ● p.
9	28.4	23.5	99	97	10	10	11.4	● a. p.
10	30.5	24.5	95	82	6	4	------	d p.
11	31.5	24.8	99	64	5	4	4.8	p p.
12	30.6	21.8	96	68	9	5	8.7	● a. p p.
13	29.8	22.5	78	74	7	7	6.8	p² a. ●° p.
14	28.9	22.4	75	70	9	6	3.3	p p.
15	28.2	23	79	67	9	9	------	
16	25.7	22.5	90	94	10	10	70.9	● a. p.
17	25.4	22.2	95	95	10	10	109.2	● a. p. ⊤ p.
18	28.7	23	97	73	10	9	1.8	● a.
19	31.2	22.5	97	76	6	4	------	
20	32	22.2	98	75	5	6	------	◡ p.
21	31.8	22.5	95	70	5	6	.3	p p.
22	31	24.2	90	78	9	7	.8	● p.
23	31.8	23	97	80	6	7	------	
24	32.5	23.4	90	75	8	4	------	
25	31	24.3	88	70	5	4	1	◡ p p.
26	31.5	23.4	91	73	10	4	2.3	● a.
27	30.4	23	78	74	7	7	1.8	p² p.
28	31	23.5	81	75	7	4	.3	●° p.
29	31.4	24	81	69	6	3	.5	p p.
30	30.7	24.5	89	76	8	7	.8	p a.
31	30.8	25	90	74	6	5	1.5	d a. p.
Mean	30.3	23.4	91.1	78.2	7.4	6.5	------	
Total	------	------	------	------	------	------	249.1	

SUMAY, GUAM (Ladrones Islands).

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.2	23.6	71	60	2	3	------	
2	28.6	24.2	76	63	3	5	------	
3	28.6	24.2	82	68	6	9	------	
4	30.6	22.4	80	61	1	3	------	
5	28	22.2	82	65	1	2	------	
6	28.8	22	79	63	4	6	------	
7	29	23	77	59	4	6	------	
8	28	24.6	83	68	2	8	0.5	
9	28.6	24.6	80	66	7	7	------	
10	28.4	24.8	82	66	2	2	10.2	
11	27	22.8	91	80	10	10	2.5	
12	27.2	24.8	73	63	6	10	2.5	
13	28.8	24.6	83	70	3	6	40.6	
14	25.6	22.8	97	84	10	10	127	
15	24.8	23.6	95	97	10	10	165.1	
16	28.4	22	95	78	10	9	4.3	
17	29.6	23.8	84	64	2	8	------	
18	28.4	25	84	70	2	5	.5	
19	29	23.8	87	69	6	6	------	
20	29.6	24.8	84	69	3	3	------	
21	29.6	24.8	84	62	2	4	------	
22	29.4	24.6	87	70	1	9	------	
23	29.8	25	84	66	1	3	------	
24	30	25	84	65	2	1	------	
25	28.6	24.8	84	73	3	7	.8	
26	29	23.6	88	73	4	7	11.4	
27	28.2	24	85	73	4	5	2.1	
28	29	25.6	79	68	4	5	1.3	
29	29	24	85	69	3	8	1.3	
30	29.2	25.2	84	71	3	4	------	
31	28.6	25.4	84	70	10	10	10.2	
Mean	28.6	24.1	83.6	69.1	4.2	6.2	------	
Total	------	------	------	------	------	------	380.3	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	23.2	97	58	10	9	------	
2	30	23.4	88	70	10	4	1	d a. ●° p.
3	30.9	23	98	71	10	5	------	
4	30.7	23	96	65	10	3	12.2	☐☿ ●° ↘ p.
5	30.2	22.9	98	70	10	4	------	p° p.
6	30.2	23	97	71	8	9	3	●° p.
7	29.9	23.1	96	68	10	8	------	p° a.
8	29.8	22.4	95	66	10	4	1.3	p p.
9	29.4	22	93	70	9	7	2.5	● a.
10	30	22.5	94	66	10	7	3.3	●° a. p.
11	30.2	22.4	95	56	9	4	------	
12	29.7	22.2	97	73	9	8	------	☊ a.
13	30	23.7	91	67	10	10	20.3	● p.
14	29.5	22.1	95	70	10	8	------	p° a.
15	30	22.8	90	62	10	8	------	
16	28.5	22.2	93	74	10	10	.5	p° a. p.
17	27.4	22.5	98	71	10	10	------	p° p.
18	29.4	21.9	94	84	10	9	------	
19	30.3	22.5	97	91	7	10	10.7	☊ a. d a. p.
20	30.1	21.1	97	76	5	7	------	☋ ☾ p.
21	31.3	22.1	97	65	8	4	7.9	☊ a. ● p.
22	30.6	22.8	96	76	10	9	2.5	●° p.
23	30	22.1	97	83	10	9	5.1	☐☿ ☋ ☾ p.
24	31.3	22.5	77	70	9	5	21.1	● a. p. ☋ ☾ p.
25	31.5	23.5	95	66	10	3	15.5	● ☽° a. ● ☿ p.
26	31.5	23.5	96	59	7	3	31.2	☐☿ ☽ ●² p.
27	30.5	24	95	67	10	7	5.1	●° a. p.
28	31.4	24.2	81	62	10	2	------	p p.
29	30.7	25.4	89	69	8	2	------	
30	31.7	25	92	69	10	2	8.9	☐☿ ● p.
31	31	23.7	98	74	10	8	42.2	● a. p. ☐☿ p.
Mean	30.3	22.9	93.9	69.6	9.3	6.4	------	
Total	------	------	------	------	------	------	194.3	

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	21.7	91	69	9	8	2.8	☋ a. d° p.
2	29.6	23.7	93	65	10	9	.8	● ≡ a. d ☌° p.
3	30.5	21.5	97	69	2	6	------	☊ a.
4	29.4	21	96	72	9	3	9.4	☊° ● a.
5	29.6	21	95	68	8	7	.3	☋° d° a. ↘ p.
6	27.9	22.8	87	92	10	10	10.2	d a. p. ● ≡ p.
7	30.8	22	86	68	9	7	.6	☽ ●° a. d° p.
8	31	24.1	80	59	10	6	------	☊ d° a.
9	29.5	23.5	81	61	8	8	5.9	●° ◠² a. ● p.
10	30.7	23.7	77	69	8	8	------	
11	29.5	20.6	90	67	2	7	9.2	☊ ● a. d p.
12	29.2	21.7	94	67	9	8	3	● p.
13	31	23.4	76	66	9	7	1	●° a. p. ◠ p.
14	29.6	22.7	90	63	8	7	.5	d° ◠ a. ♁°☉°●°
15	28.9	20.9	97	63	9	10	.3	●° a.
16	27.2	23.5	82	92	10	10	76.8	● a. p. d p.
17	27.7	22.9	92	90	10	10	15.2	● a. p. ☐☿ ≡ p.
18	28.5	23.5	97	83	10	9	5.6	●° p.
19	30	23.4	94	76	4	5	------	☌ ↘ p.
20	30.2	25.4	90	74	8	3	7.6	☋ d° p.
21	29.7	23.6	97	75	8	7	23.9	p. ◠ a. ●° a. p.
22	30.7	23.4	96	73	9	8	23.6	◠² a. p. ●° a. p.
23	29.7	22.6	97	74	8	8	1.1	d° p a. ☋° ☉° ↘ p.
24	30.6	22.4	91	80	8	8	10.5	d° a. ⊕° ☽° ●° ☋° ☾
25	30.3	25.3	88	68	10	7	.3	d² a. d ◠ p.
26	30.7	21.4	96	67	9	7	1.1	d ◠ a. p. ☋° ☉° p.
27	30.5	24.4	80	83	5	8	18.3	● a. p.
28	30.9	22.5	90	69	7	8	1.3	d° ●° p.
29	31	25.5	85	68	4	4	1.1	p ◠ a. p. d° p.
30	31.6	25.1	90	72	4	8	4.9	● ◠ a. d° a. p.
31	31.8	24	88	86	8	9	9.4	p ◠ a. ● ☿ ↘ p.
Mean	30	23	89.8	72.5	7.8	7.4	------	
Total	------	------	------	------	------	------	244.7	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.6	19	100?	63	10	8	------	
2	29.6	22.3	95	75	10	10	.6	p° a.
3	32.5	22	98	60	9	8	------	
4	32.6	20.6	97	62	4	6	------	d p.
5	32.6	20.1	97	73	5	8	18	● ☿° p.
6	29.3	21	98	76	6	8	------	
7	30	21.2	97	64	8	8	1.8	p. a.
8	30.7	22.5	88	65	9	8	------	
9	30.6	19	96	76	7	9	------	d p.
10	31.8	19.2	96	55	6	8	------	
11	31.6	19.5	96	61	5	8	------	
12	29.9	21.4	95	84	9	10	2	p p.
13	31.5	20	97	53	8	8	------	
14	31	19.8	93	56	8	8	------	
15	30.9	20.3	93	57	9	8	------	
16	26.6	22.5	91	78	10	10	30.2	●² p.
17	25	22.3	97	97	10	10	63.4	●² a. p.
18	29.8	22.5	97	71	10	9	1.8	p p.
19	33	22	97	62	10	7	------	
20	33.1	21.3	100	81	10	9	8	≡ a. ● ☿° p.
21	32	21.5	98	69	7	8	------	
22	31.5	21.3	96	69	8	8	------	
23	33.1	21	98	85	6	10	6.5	● ☿° p.
24	32.2	21.3	99	67	8	8	------	
25	32.2	21.2	98	55	6	4	------	
26	31.9	18.1	96	65	3	8	------	
27	30.5	19.2	98	79	6	9	13.7	☿° ● p.
28	31.4	19.7	99	70	6	8	------	
29	33.3	20.4	96	65	5	6	------	
30	32.3	21	97	69	3	8	------	
31	31.5	21	97	77	8	9	.3	●° p.
Mean	31.1	20.8	96.5	69	7.4	8.2	------	
Total	------	------	------	------	------	------	146.3	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.7	21.1	92	39	6	6	------	
2	34.6	20.8	89	46	6	5	------	
3	34	22	84	56	6	4	------	☿ p.
4	35.4	21.4	93	47	4	6	------	
5	34.4	21	94	53	5	6	4.3	☿ ● p.
6	31.8	20.5	96	70	5	9	1.3	p p.
7	34.5	21	93	61	5	7	------	
8	34.1	17.3	92	51	4	5	------	
9	33.4	20.2	95	58	4	6	------	
10	33.4	20.5	93	52	3	6	------	
11	34.9	20.7	92	43	4	5	------	
12	32.8	20.5	92	59	7	6	------	
13	32.6	21	84	60	8	7	1	d p.
14	33.8	20.2	93	43	7	6	------	
15	34	19.8	94	52	6	6	------	
16	31.3	19.4	93	68	6	7	------	
17	28.2	21.9	91	74	9	9	------	
18	32.9	20.8	96	65	7	7	------	
19	33.4	21.4	95	64	5	9	.3	d p.
20	34.3	20.3	96	48	4	6	------	☿ p.
21	34.7	22.4	91	56	4	6	------	
22	34.8	22	93	49	4	5	------	
23	34.9	21.2	96	49	3	6	------	
24	35.6	21.4	92	51	6	6	------	
25	35.8	22.5	93	47	5	5	------	
26	35.9	21.7	90	44	1	5	------	
27	35.7	21.8	88	41	5	5	------	
28	35.3	22.3	85	44	2	5	------	
29	35	22.6	88	46	3	6	------	
30	35.3	21.9	88	46	1	6	------	
31	35.2	22.7	88	55	4	6	------	
Mean	34.1	21.1	91.6	52.8	4.8	6.1	------	
Total	------	------	------	------	------	------	6.9	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[$\phi = 14^\circ\ 14'$ N; $\lambda = 120^\circ\ 58'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	20.2	97	60	2	5	------	≡ a. d p.
2	30.2	20.3	98	60	7	8	------	♌ ≡ a.
3	30.8	20.4	98	60	9	7	------	≡ a. ●° ◠ ⊤° p.
4	30	20	98	61	6	9	1.8	♌ ≡ a. ●° ⊤° p.
5	31.6	20.6	98	59	7	8	6.4	♌ ≡ a.
6	30.5	20	98	58	8	5	------	≡ a.
7	30.1	19.4	98	58	7	8	------	≡° a.
8	30.5	19.5	97	60	9	8	------	≲ p.
9	29.8	19.3	98	59	10	7	------	p p.
10	30.8	21.1	97	60	6	6	4.8	
11	31.8	21.6	98	61	2	3	------	●° a.
12	30.3	20.4	98	61	7	8	------	≡ a.
13	28.8	19.3	97	64	10	9	12.7	≡ d a.
14	28.7	19.2	97	64	10	8	------	d a. ●° p.
15	30.8	21.1	97	60	6	7	------	●° a.
16	28.7	21	98	64	8	8	------	♌ ≡ a.
17	28.5	21.2	98	64	5	8	1.3	d a.
18	29.4	21	97	62	3	9	------	≡ a. ●° p.
19	30.6	21	98	61	10	9	------	≡ a.
20	31.5	21.4	98	60	7	8	7.9	♌ ≡ a. d p.
21	31.2	21.3	97	59	6	9	2.8	♌ ♌ ≡ a. ●° ⊤° p.
22	31.1	21.4	98	59	3	7	------	≡ a. ●° p.
23	30.8	21.3	98	61	6	10	------	p° p.
24	31.4	21.2	97	60	7	8	------	♌ ≡ a. ⊤ p.
25	31.5	21.4	97	61	5	6	------	≡ a. ⊤° p.
26	31.4	21.1	98	60	8	9	------	
27	31.4	21.3	97	60	9	7	------	♌ ≡ a. p° p.
28	31.3	21	98	61	2	6	------	p° a.
29	30.3	21	97	65	3	2	------	≡° a.
30	30.5	20.9	97	66	5	7	4.1	≡ a. ●° p.
31	31	21.9	97	61	3	4	------	♌ ≡ a.
								≡ a.
Mean	30.5	20.7	97.5	60.9	6.3	7.2	------	
Total	------	------	------	------	------	------	41.8	

IBA.

[$\phi = 15^\circ\ 20'$ N; $\lambda = 119^\circ\ 58'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	19.5	------	58	9	7	------	
2	------	17.9	85	55	2	1	------	≡ a.
3	------	17.9?	98	56	2	3	------	
4	------	20.5	95	49	7	5	------	≡ a.
5	------	21	99	65	8	2	------	≡° a.
6	------	20.3	99	75	2	2	------	≲ p.
7	------	20.8	94	70	10	8	------	p p.
8	------	19.5	94	67	1	3	------	
9	------	19	92	58	3	6	------	
10	------	19.7	93	63	7	8	2.7	⊤ ◠ d° ● ≲ p.
11	------	20.8	88	75	2	8	53.3	d ●² ◠ ≲ p.
12	------	19.9	97	72	1	9	13.1	d ● p.
13	------	21	96	66	4	7	22.9	● p.
14	------	22	96	63	10	8	------	
15	------	19.7	84	58	8	5	------	⊕ p.
16	------	18.2	93	63	3	9	------	a. ◡ p.
17	------	18.7	96	75	10	10	------	◠ ◠² a. p. ◡ p.
18	------	18.9	96	68	8	7	5.6	≡ ◠ a. ● p.
19	------	22.1	94	70	8	5	.5	● ⊕ a.
20	------	23.5	91	69	9	8	------	
21	------	21	96	65	4	6	------	≡ a. ⊤ ≲ p.
22	------	22	97	79	6	10	1.4	≡ a. ● ◪ p.
23	------	21.5	95	83	10	10	------	d° ⊤ p.
24	------	21.5	96	39	6	4	------	d ⊤ ◠ ◡ ≲ p.
25	------	21.9	95	66	2	5	16.4	◪ ● ≲ p.
26	------	21.5	89	62	1	6	------	
27	------	19	83	56	2	1	------	
28	------	18.8	92	56	2	3	------	≡ a.
29	------	19	94	62	1	3	------	≡ ♌ a.
30	------	19.8	80	60	8	9	------	d p.
31	------	20.4	90	62	2	5	------	⊕ p.
Mean	------	20.2	92.9	64	5.1	5.9	------	
Total	------	------	------	------	------	------	115.9	

TARLAC.

[$\phi = 15^\circ\ 30'$ N; $\lambda = 120^\circ\ 35'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.6	20.2	94	44	10	4	------	♌ a.
2	35.7	17	89	41	3	2	------	♌ ≡ a.
3	34.2	22.7	91	45	10	2	------	♌ ♌ a.
4	36	21.6	93	45	10	7	18.8	♌ ♌ a. ● ⊤ p.
5	34.5	21.5	96	54	10	8	------	♌ ♌ a. ⊤ d p.
6	34.7	23.2	93	45	10	2	------	♌ ♌ a.
7	34	23.3	95	46	10	8	------	♌ ♌ a.
8	33.7	21.1	89	43	4	3	------	♌ ♌ a.
9	32.6	21.9	88	58	10	10	1.3	♌ ♌ a. ● p.
10	35.2	21.1	92	46	10	4	15.5	♌ ♌ a. ● ◪ p.
11	34	22.4	96	52	10	8	.3	♌ ♌ a. d° p.
12	33.6	21.1	92	56	10	9	------	♌ ♌ a. d° p.
13	32.4	21.7	95	57	4	9	------	♌ ♌ a.
14	32.6	22.5	89	52	10	10	------	♌ ♌ a.
15	32.3	20	93	48	10	5	------	♌ ♌ d° a.
16	34	20	91	41	8	5	------	♌ ♌ a. ♆ p.
17	30.2	22.4	91	61	8	10	------	♌ ♌ a. d° p.
18	34.6	22.4	92	56	9	9	------	♌ ♌ a. d° p.
19	35.3	22	94	56	8	9	------	♌ ♌ a. d° ⊤ p.
20	35.5	23	94	43	10	9	9.1	♌ ♌ a. ⊤ ● p.
21	35	23.2	98	49	10	4	------	♌ ♌ a.
22	34.4	22.9	93	49	4	5	------	♌ ≡ a. d° p.
23	35.6	22.5	96	49	8	10	33.5	♌ a. ● ◪ p.
24	34.5	22.6	97	71	10	10	.3	♌ a. d° p.
25	34.4	22.8	94	53	3	10	------	♌ a.
26	35.1	21.5	96	55	1	4	------	♌ a.
27	34.8	20.8	92	44	1	4	------	♌ a.
28	34.7	19.7	93	46	2	4	------	♌ a.
29	35	20.1	82	49	2	4	------	♌ a.
30	32.3	20.7	90	59	2	9	------	♌ a. d° a. p.
31	34.8	21.2	95	52	4	4	------	♌ a. d° p.
Mean	34.2	21.6	92.7	50.5	7.1	6.5	------	
Total	------	------	------	------	------	------	78.8	

SAN FERNANDO UNION.

[$\phi = 16^\circ\ 37'$ N; $\lambda = 120^\circ\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	20.9	93	66	5	3	------	
2	31.9	19.9	93	55	2	2	------	♌° a.
3	31.1	20.9	91	67	4	1	------	♌≡° a.
4	30.2	20.6?	94	69	1	2	------	♌° a.
5	30.8	20.9?	92	63	2	2	------	♌° a.
6	30	21.4	93	63	5	2	------	
7	30.3	21.5	95	63	2	2	------	
8	30.5	------	89	58	3	2	------	♌° a.
9	31.1	20.9	91	63	2	3	------	♌° a.
10	30.9	22.4	91	65	8	3	------	♌° a.
11	30.5	20.9	92	64	5	2	------	
12	30.6	20.6	94	69	1	1	------	
13	31.2	21?	91	62	3	3	21.6	♌ ²a.
14	30.5	21.9	92	58	3	6	------	♌° a. ●² p.
15	30.6	21.6	92	64	6	5	------	♌° a.
16	31.6	22	83	65	2	5	------	
17	32.1	22.3	91	52	6	5	------	♌° a. ⊥² p.
18	33.2	22.8	87	73	9	10	------	∈° p.
19	33.3	23	86	67	8	3	6.4	
20	31.2	23.5	91	67	4	5	------	≡° a. ◪° ● p.
21	30.9	23	87	75	10	9	------	⊤° p.
22	33.5	23.4	92	69	3	10	2.3	d° p.
23	31.3	23.4	93	73	10	8	------	♌° a. ⊤° ● p.
24	31.6	21.8	94	65	2	3	7.6	⊤° p.
25	31.6	21.7	95	61	2	3	------	♌° a. ● ⊤° p.
26	31.4	22	93	63	1	1	------	♌° a.
27	32.4	20.9	92	57	1	1	------	♌° a.
28	31.4	19.5	91	61	1	1	------	♌° a.
29	31.6	20.7	94	61	2	2	------	♌° a.
30	31.7	20.4	94	62	1	3	------	♌° a.
31	32	22.4	90	61	2	3	.8	♌° a. ● p.
Mean	31.3	21.6	91.5	63.9	3.7	3.6	------	
Total	------	------	------	------	------	------	38.7	

METEOROLOGICAL DATA, ETC.—Continued.

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	18.6	94	50	10	4	------	☽ a.
2	31	18.5	92	47	6	1	------	
3	31.8	18.7	98	56	4	2	------	♌² ☰² a. d° p.
4	30.4	22	88	54	10	5	------	d° p.
5	29.5	21.5	92	56	10	3	0.3	☄° d² p.
6	28.3	21	93	61	10	9	------	
7	28.2	20.8	90	57	10	9	------	
8	27.3	19.8	95	72	10	10	.5	
9	27.2	20.7	98	73	10	10	2.8	d a.
10	30.7	20.6	98	52	10	6	30.7	☰²a. ☐☄°●°p.
11	29.5	20.7	98	56	10	9	1.8	d² p p.
12	28.9	20.9	97	73	10	6	1.8	d a. ● ◠ p.
13	28.3	21.1	97	85	9	10	1.8	d p.
14	29.5	20.3	96	65	9	9	------	☰² ☾² a. ☽° p.
15	30	19.6	95	53	10	8	------	⊕° a. ☽° p.
16	29.5	17.9	98	57	8	9	------	♌²a. ☽°a. p. ☾²p.
17	24.4	20.6	93	84	10	10	14.2	d a. p. ●° p.
18	27.3	20	97	70	10	10	.5	●° d a. p ◠ p.
19	31.7	20.4	95	62	10	7	------	☥°☽°a.◠°☐☄²p.
20	33.4	22.2	96	56	8	6	3	☽² a. ☐☄ ●° p.
21	32.8	21.7	96	62	4	7	------	⊕²a.☽°a.p. ☇♅²
22	32.9	22.8	93	54	9	9	------	♌°⊕°a. ☇°♅²p.
23	32	21.5	94	57	7	6	9.7	☐☄ d² p.
24	31.1	21.4	99	62	10	4	18.3	d° a. ☐☄ ● p.
25	30.1	20.7	99	71	7	7	.8	☰² d° a.☐☄°d²p.
26	33	20.6	99	54	10	4	------	
27	33.4	18	94	53	1	2	------	♌² a.
28	33.8	19.5	94	52	1	3	------	♌² a.
29	34.1	19.5	95	54	3	3	------	♌² a.
30	31.6	19.9	95	57	3	4	------	♌² a.
31	32.8	20.4	98	56	9	4	------	♌² a. ☐☄° p.
Mean	30.5	20.4	95.4	60.4	8	6.3	------	
Total	------	------	------	------	------	------	86.2	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.2	22.4	78	56	3	6	------	♌² ☰ ☽ a.
2	30.2	23	79	63	2	0	------	♌ ☰ a.
3	30.3	22.5	73	53	7	0	------	♌ a.
4	30.1	20.2	75	54	0	0	------	♌² ☰ a.
5	------	23	77	51	4	0	------	♌² ☰ a. d p.
6	29.6	21.5	76	58	0	3	------	♌² ☰ ☽ a.
7	29.6	21.5	71	54	1	0	------	♌² ☰ a.
8	30.4	22.6	66	51	4	0	------	♌ a.
9	30.2	22.7	69	52	7	2	------	♌ a.
10	30.2	23.9	74	63	9	9	------	♌ a.
11	29.5	23.5	76	64	9	3	------	♌ d a.
12	29.9	22	78	60	0	3	------	♌² ☰ a. ☇ p.
13	30.4	23.4	78	63	9	5	------	♌ a. ☇ p.
14	30.3	23.2	77	64	2	9	------	♌² ☰ a.
15	30.5	23.4	77	60	10	5	------	♌ a.
16	29.7	22.4	78	63	8	7	------	♌ a. ☋² ♅ p.
17	31.2	22.6	62	54	8	6	------	♌ a. ♅ p.
18	31	23.9	65	59	9	9	------	☾ p.
19	30.2	23.4	72	60	7	6	------	☐☄° d p.
20	30.4	23.4	80	64	10	9	10.9	☥° d ● p.
21	30.2	23.2	80	64	6	8	------	☽² d ☐☄° p.
22	30.8	25.4	80	65	8	7	------	♌ a. ☥° d p.
23	30.3	------	------	65	8	7	------	♌ a. ☥° p.
24	31.2	24.2	74	62	6	4	1	♌ a. ☥° ◠° p p.
25	31.2	23.5	79	60	2	0	------	♌ a. ☥° d ◠° p.
26	31.5	23.7	77	59	2	3	------	♌ a.
27	31.4	23.5	78	65	0	0	------	♌² ☰ a.
28	30.7	------	76	64	0	3	------	♌² ☰ a.
29	31.1	23.5	78	64	6	4	------	♌² ☰ a.
30	31.2	22.5	74	56	0	4	------	♌² ☰ a. d p.
31	31.4	23.5	76	65	7	4	------	♌² ☰ a. ☥° p.
Mean	30.5	23	75.1	59.8	5	4.1	------	
Total	------	------	------	------	------	------	11.9	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	23.3	88	54	3	2	------	
2	32.4	21.1	88	51	1	1	------	☰° a.
3	31.1	21.3	87	47	6	1	------	☰° a.
4	32.6	18.5	94	48	0	1	------	♌² ☰ a.
5	31.3	19.9	86	52	0	1	------	♌° ☰ a.
6	31.1	21.8	78	48	0	1	------	☰° a.
7	33.1	20.1	79	47	1	1	------	☰° a.
8	35.1	19	89	37	0	2	------	♌° ☰ a.
9	33.8	20.4	82	46	4	4	------	☰ a.
10	31.9	21.9	80	51	10	4	------	d a.
11	31.8	19.7	90	53	2	3	------	☰ a.
12	32.3	21.6	83	48	8	2	------	☰° a.
13	31.3	20.4	90	56	1	1	------	♌° ☰ a.
14	30.8	22.1	89	58	1	5	------	☰ a.
15	32.1	20.4	92	63	0	2	------	♌ ☰ a.
16	35.8	19.7	94	41	0	4	------	♌² ☰ a.
17	35	21	66	36	10	5	------	☄° ☋² p.
18	31.6	24.1	77	53	10	10	------	☾ p.
19	31.4	23.1	85	62	10	5	------	
20	29.8	23.8	84	77	10	10	3.3	d a. ● ☇ p.
21	33.8	23.7	93	55	10	4	------	☥ ◠² p.
22	32.1	22.9	94	72	1	9	------	♌² ☰ a.
23	31.9	23.3	90	52	10	9	------	d a.
24	33.9	23	86	52	9	4	4.8	☐☄ ● p.
25	33.2	22.8	96	63	2	2	------	♌ a. ☐☄ ◠ p.
26	32	22.4	92	68	0	1	------	♌ ☰° a.
27	32.8	22.6	90	64	8	2	------	
28	32.6	21.2	96	65	0	0	------	♌² ☰ a.
29	32.9	21.1	92	62	0	1	------	♌² ☰ a.
30	33.8	20.8	92	62	0	1	------	☋² ☰ a.
31	33.7	22.9	94	66	3	4	------	♌ ☰ a. ☥ p.
Mean	32.6	21.6	87.6	55.1	3.9	3.3	------	
Total	------	------	------	------	------	------	8.1	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	25.4	21.6	86	75	10	4	1.8	d a.
2	26.8	21.4	87	79	10	4	------	●° a.
3	26.5	22.2	89	79	8	9	1.7	d a. p. ●° p.
4	22.4	19.1	87	84	10	10	.4	d a. p° p.
5	25.2	18.9	84	73	9	9	.2	d° p.
6	25.5	20.6	85	69	4	8	8.5	d° a. p. ●° p.
7	24.9	19	84	70	10	7	8.1	● a. p.
8	25.8	17.8	94	74	10	10	5.6	d a. ● p.
9	23.3	20.3	87	89	10	10	72.1	d ●² a. ● p.
10	22.6	19.6	83	82	10	10	9.7	d a. ●° a. p.
11	25.8	19.6	82	74	9	9	------	d° p.
12	26	21.8	84	83	2	10	15.9	d ● a. p.
13	25.8	20.1	86	72	10	8	1	d a.
14	26.9	22.2	85	67	8	6	.7	d a.
15	27.2	22.8	83	69	3	3	1.3	d° ●° a.
16	27.2	21.7	81	68	2	2	------	☾° p.
17	26.3	22.3	78	73	5	8	2.7	d° ●° p.
18	23.8	21.2	83	90	10	10	19.3	d a. p. ●° p.
19	24.8	21.9	91	93	10	10	6.9	●° a. d a. p.
20	28	22.5	94	77	8	2	------	♌ p.
21	29.3	21	94	79	2	8	------	♌ a.
22	29.5	24.3	95	78	4	8	1	◠² d° a.
23	27.5	23.7	90	84	7	7	------	
24	26.4	22	81	69	7	2	1.5	d² p.
25	27.6	21.7	91	80	10	7	------	p° a.
26	27.8	23.9	90	80	6	1	.6	
27	28.3	23.7	90	78	3	3	------	d a.
28	29	23.8	91	77	2	7	------	p° a.
29	29	24.2	89	75	6	7	------	
30	29.4	24.4	90	77	8	4	------	
31	29.5	24.4	89	76	2	4	------	d$_{\odot}$ ♌ p.
Mean	26.6	21.7	87.2	77.2	6.9	6.7	------	
Total	------	------	------	------	------	------	159	

SEISMOLOGICAL BULLETIN FOR MARCH, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

6, 3^h 30^m. **Sumay** (Guam Island, Marianas). Earthquake of intensity III.

6, 15^h 14^m. **Butuan** (Northern Mindanao). Osillatory earthquake. Direction NNE–SSW, intensity III, duration 15 seconds. There were likewise noticed some light shocks in the directions E–W and N–S.

8, 9^h 45^m 4^s.* **Iba** (Western Luzon). Earthquake of intensity III. The point of origin of this disturbance lay in the China Sea some 50 kilometers from the coast of Zambales.

10, 11^h 2^m. **Aparri** (NE of Luzon). Oscillatory earthquake. Direction N–S, intensity III.

11, 1^h 7^m. **Northeastern Mindanao.** Earthquake of intensity IV, throughout the entire quasi-peninsula of Surigao. The reports received from Surigao and Butuan, which stations are about 110 kilometers apart, the one lying north and the other south-southwest of the peninsula mentioned, indicate that the center must be sought underneath the eastern part of Butuan Bay. At both stations a few aftershocks of but little intensity were felt, the principal one ocurring at 2^h 30^m. In Surigao the earthquake was preceded by a noise resembling that of a gust of wind (III of Davison's scale). Both in Surigao and Butuan the disturbance lasted 6 seconds. Neither the Manila seismographs nor those of Zikawei and Batavia registered the quake.

16, 8^h 40^m. **Santa Cruz, Laguna** (E of Luzon). Oscillatory earthquake. Direction E–W, intensity II.

20, 20^h 38^m 21^s.* **Balanga** (W of Luzon). Oscillatory earthquake. Direction N–S, intensity III, duration 6 seconds. The center of the earthquake lay approximately 100 kilometers from Manila, in the southern part of Zambales Mountain Range.

20, 22^h 4^m 32^s.* **Legaspi** (SE of Luzon). Oscillatory earthquake. Direction N–S, intensity III, duration 8 seconds. Its epicenter lay in the region of Mayon Volcano, Albay.

26, 3^h 18^m 5^s.* **Baguio** (Center of Luzon). Earthquake of intensity V. Two repetitions at 4^h 8^m and 4^h 24^m were of intensity III and IV, respectively. The epicenter lay probable in the Province of Nueva Vizcaya.

27, 0^h 45^m 30^s.* **Zambales and Bataan Provinces** (W of Luzon). Earthquake of intensity III, felt over an area of 200 kilometers in length and 90 in width, whose major axis lay in the direction NNW to SSE. The epicenter appears to have been within the southern part of the Zambales Mountain Range.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight = 0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude. (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
38	4	I_d	V.	----------	----------	18 04 16	18 04 19	0.02	2	18 06	Vertical component 0.01 mm.
39	5	I_d	V.	----------	----------	16 48 28	16 48 30	.05	1.8	16 51	V. C. 0.01 mm.
40	7	I_v	V.	15 31 47	----------	15 32 29	15 32 46	.38	2.4	15 42	V. C. 0.09 mm.
			H. NNW	15 31 56	----------	15 32 39	15 33 56	.11	9.3	15 42	
			H. WSW	15 31 56	----------	15 32 40	----------	----------	----------	15 42	
41	8	II_v	V.	9 45 04	----------	9 45 24	9 45 41	.49	2.4	9 54	V. C. 0.24 mm. Earthquake, III at Iba (W of Luzon).
			H. WSW	9 45 06	----------	9 45 25	----------	----------	----------	9 55	
42	10	I_d	V.	21 21 04	----------	21 21 21	21 21 52	.10	2.4	21 25	V. C. 0.07 mm.
			H. NNW	21 21 04	----------	21 21 22	----------	----------	----------	21 25	
			H. WSW	21 21 04	----------	21 21 21	----------	----------	----------	21 25	
43	20	II_v	V.	20 38 21	----------	20 38 36	20 38 50	.88	2.4	20 47	V. C. 0.58 mm. Earthquake, III at Balanga (W of Luzon).
			H. NNW	20 38 21	----------	20 38 36	----------	----------	----------	20 47	
			H. WSW	20 38 21	----------	20 38 36	----------	----------	----------	20 47	
44	20	I_v	V.	22 04 32	----------	----------	----------	----------	----------	22 08	V. C. 0.01 mm. Earthquake, III at Legaspi (SE of Luzon).
45	25	II_d	H. NNW	14 41 30	----------	14 41 51	----------	----------	----------	14 47	V. C. 0.50 mm.
			H. WSW	14 41 30	----------	14 41 51	----------	----------	----------	14 47	
46	26	I_d	V.	2 39 52	----------	2 41 37	2 42 00	.04	2.4	2 50	
47	26	I_v	V.	3 18 05	----------	----------	----------	----------	----------	3 21	V. C. 0.08 mm. Earthquake, V at Baguio (central Luzon).
48	26	I_d	V.	6 09 30	----------	6 09 40	6 09 45	.13	2.4	6 14	V. C. 0.08 mm.
49	26	I_d	V.	8 52 09	----------	8 52 17	8 52 55	.07	2.4	8 55	V. C. 0.03 mm.
50	26	I_d	V.	9 17 16	----------	9 17 26	9 18 09	.80	2.4	9 22	V. C. 0.37 mm.
51	26	I_d	V.	9 32 31	----------	9 32 35	9 33 11	.02	2.4	9 36	V. C. 0.01 mm.
52	26	I_d	V.	19 55 00	----------	19 55 17	19 55 57	.29	2.4	20 03	V. C. 0.11 mm.
53	27	I_d	V.	0 37 10	----------	0 37 25	0 37 58	.11	2.4	0 41	V. C. 0.04 mm.
54	27	II_v	V.	0 45 30	----------	0 45 45	0 46 26	1.76	2.2	0 57	V. C. 0.51 mm. Earthquake, III in Zambales Range.
55	31	II_r	V.	1 05 54	1 10 16	1 14 04	1 16 06	.01	11.2	2 04	
			H. NNW	1 05 57	1 10 16	1 14 18	1 16 06	.07	10.1	2 05	
			H. WSW	1 05 57	1 10 14	1 14 18	1 16 29	.03	9	2 05	
56	31	I_d	V.	12 42 47	----------	12 43 06	12 43 10	.19	2.4	12 48	V. C. 0.07 m.
57	31	I_d	V.	21 25 35	----------	21 25 42	21 25 48	.07	2.4	21 29	V. C. 0.01 m.

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation, NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

6, 3^h 30^m. **Sumay** (Isla de Guam, Marianas). Temblor de tierra de intensidad III.

6, 15^h 14^m. **Butúan** (N de Mindanao). Temblor oscilatorio, dirección NNE–SSW, intensidad III, duración 15 segundos. Distinguiéronse además varias oscilaciones ligeras de E–W y N–S.

8, 9^h 45^m 04^s.* **Iba** (W de Luzón). Temblor de tierra de intensidad III. El origen de este temblor se hallaba en el mar de la China á unos 50 kilómetros de las costas de Zambales.

10, 11^h 02^m. **Aparri** (NE de Luzón). Temblor oscilatorio, dirección N–S, intensidad III.

11, 1^h 07^m. **NE de Mindanao.** Temblor de tierra de intensidad IV, en toda la cuasipenínsula de Surigao. Las notas recibidas de Surigao y Butúan, estaciones distantes entre sí unos 110 kilómetros y situadas al N y al SSW respectivamente de dicha península indican que el origen se hallaba en la parte oriental de la bahía de Butúan. En ambas estaciones se observaron algunas réplicas ó aftershocks de muy poca intensidad, la principal tuvo lugar á 2^h 30^m. En Surigao precedió al temblor un ruido semejante á una ráfaga de viento (III de la escala de Davison). La duración en las dos estaciones mencionadas fué de 6 segundos. No lo registraron los seismógrafos de Manila ni los de Zikawei y Batavia.

16, 8^h 40^m. **Santa Cruz, Laguna** (E de Luzón). Temblor oscilatorio, dirección E–W, intensidad II.

20, 20^h 38^m 21^s.* **Balanga** (W de Luzón). Temblor oscilatorio, dirección N–S, intensidad III, duración 6 segundos. El origen de este temblor se hallaba á unos 100 kilómetros de Manila en la parte S de la cordillera de Zambales.

20, 22^h 04^m 32^s.* **Legaspi** (SE de Luzón). Temblor oscilatorio, dirección N–S, intensidad III, duración 8 segundos. Epicentro en la región del Volcán Mayon de Albay.

26, 3^h 18^m 05^s.* **Baguio** (centro de Luzón). Temblor de tierra de intensidad V. Repitió con intensidad III y IV á 4^h 08^m y 4^h 24^m. El epicentro se hallaba probablemente en la Provincia de Nueva Vizcaya.

27, 0^h 45^m 30^s.* **Provincia de Zambales y Bataan** (W de Luzón). Temblor de intensidad III sentido en un área de 200 kilómetros de largo por 90 de ancho, cuyo eje mayor estaba orientado de NNW á SSE. El epicentro parece se hallaba en la parte S de la cordillera de Zambales.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el meridiano 120° E de Greenwich.

BULLETIN FOR APRIL, 1910.

METEOROLOGICAL BULLETIN FOR APRIL, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The monthly mean of atmospheric pressure for almost all the stations of the Philippines is somewhat below that of April, 1909. The mean for Manila differs from the normal of this month by —0.80 millimeter. The highest pressures were registered everywhere on the 15th and the lowest during the period 18th to 23d.

The average of temperature for this month is in general slightly below that of the preceding year, the greatest differences being those of Manila and San Isidro, Nueva Ecija, —1.0° C. and —0.9° C., respectively. The absolute maximum and minimum temperatures, as observed at the Manila Observatory, were 35.2° C. and 20.1° C.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR APRIL, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from April, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from April, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	757.32	—1.18?	758.82	15	755.64	21	27.2	—0.2	34.2	27	20.7	22
Surigao	58.24	— .77	60	15	55.75	22	26	— .5	31.5	23, 27	21.9	20
Cebu	58.06	— .87	59.83	15	55.96	22	27.1	— .3	32.1	21	21.6	22
Iloilo	58.26	— .37	59.65	15	56.74	23	27.4	— .7	34.4	19	21.5	21
Ormoc	58.27	— .59	59.83	15	56.02	22	26	+ .3	33.1	16	18.5	17
Tacloban	58.65	— .75	60.35	15	56.55	22	26.8	— .7	33.5	18	23	14, 17
Calbayog	58.84	— .73	60.49	15	56.66	23	26.1	— .2	34.2	15	20.5	17
Legaspi	58.83	— .58	60.50	15	56.69	23	27.1	— .7	32.9	21	20.3	18
Atimonan	58.81	— .38	60.47	15	56.93	19	28.1	+ .3	34.7	18	21.8	18
Manila	58.58	— .35	60.21	15	56.85	22	27.2	—1	35.2	16	20.1	9
San Isidro	58.54	— .27	60.23	15	56.71	18	27.5	— .9	36.4	18	------	------
Dagupan	58.38	— .40	59.97	15	56.78	22	28.2	— .2	36.9	29	21.3	2
Baguio[2]	636.59	------	638.23	15	635.11	22	18.4	------	26.2	20	14.4	1
Vigan	758.50	— .59	760.29	15	756.87	22	28.2	+ .5	34.7	23	22.4	11
Tuguegarao	59.02	0	60.61	15	56.61	18	27.6	— .4	37.4	10, 18	20.1	1
Aparri	59.35	— .22	60.90	15	57.23	18	26.6	— .1	33.1	10	20.6	8

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Precipitation.—With a very few exceptions, the amount of rainfall for this month in the stations of the Philippines is greater than that for April, 1909. The total for Manila differs from the normal of this month by +62.9 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF APRIL, 1910.

Station.	Total.	Departure from April, 1909.	Rainy days.	Departure from April, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from April, 1909.	Rainy days.	Departure from April, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	129.7	— 26.9	8	— 2	40.4	5	Sumay, Guam	75.8	+ 41.9	14	+ 8	19	24
Isabela, Basilan	105.7	+ 75.8	14	+ 6	28.7	16	Calapan	155.9	+ 65.2	15	+ 7	60.2	24
Zamboanga	38.3	+ 34.5	4	+ 1	29.2	4	Virac	131.7	+105	14	+ 4	34.2	22
Davao	306.8	+220.2	9	+ 6	76.2	21	Nueva Caceres	128.9	+ 95.8	11	+ 7	51.9	25
Cotabato	149.2	— .8	13	+ 1	38.1	27	Batangas	49	+ 48.2	4	+ 2	24.6	24
Cagayan, Misamis	109.8	+ 89.9	8	+ 3	34.3	21	Atimonan	84.1	+ 14.2	6	+ 2	62	24
Dapitan	213.2[1]	-------	8	------	72.9	21	Silang	185.7	+104.9	5	0	73.4	24
Butuan	184.8	+117.9	23	+14	31.5	21	San Antonio, La Laguna	158.4	+142.9	10	+ 7	74.2	24
Yap, W. Carolines	204.2	-------	21	------	56.1	15	Manila	94.1	+ 58.7	6	+ 2	61.8	24
Tagbilaran	172.1	+157.1	9	+ 3	72.6	21	Iba	107.5	-------	5	------	55.3	25
Surigao	383	+247.2	20	+12	55.9	2	San Isidro	114.9	+ 91.3	8	+ 7	47.2	24
Cebu	115.3	+111.8	10	+ 7	36.6	23	Tarlac	83.6	+ 25.8	6	— 2	56.4	20
Iloilo	28.2	+ 27.2	9	+ 8	6.4	22	Dagupan	32.3	— 22.8	4	— 1	16.8	25
San Jose Buenavista	71.3	— 17.6	8	+ 5	26.2	23	Baguio	173.6	+ 13.2	13	— 4	29.7	28
Ormoc	100	+ 76.6	15	+11	29.7	21	San Fernando, Union	5.3	+ 5.3	3	+ 3	2.5	25
Tacloban	261.4	+191.9	18	+ 9	56.1	21	Echagüe	114.8	+ 69.2	8	— 1	32	24
Borongan	485.1	+387.2	23	+11	132.4	22	Candon	17.2	+ 17.2	3	+ 3	15.2	29
Calbayog	106.4	+ 85.6	15	+ 7	22.9	22	Vigan	79.7	+ 79.4	2	+ 1	78.7	25
Masbate	121.3	+121.3	9	+ 9	60.5	23	Tuguegarao	217.2	+119.7	8	+ 3	77.7	20
Romblon	125.5	+107.1	8	+ 4	47.2	22	Laoag	10.4	+ 9.1	4	+ 3	5.1	13
Laoang	272.5	+241.2	19	+ 8	100.6	3	Aparri	59.3	+ 22.5	7	+ 2	35.3	13
Gubat	86.8	+ 77.9	14	+11	32.5	23	Sto. Domingo, Batanes Is	114	— 55.7	15	+ 5	49.1	26
Legaspi	218.3	+180.6	15	+ 8	64.5	9							

[1] 29 days only.

DEPRESSIONS AND TYPHOONS.

During the whole month of April only one depression has been observed in the Philippines. We have no means to ascertain whether it ever attained the development of a real typhoon. When crossing the Visayan Islands it was simply a very shallow depression of hardly any importance. Once in the China Sea, its influence on some of our stations was quite clear; but the data we possess to follow its movements are so meager, that we could not give to its track more than a slightly probable value, wherefore we abstain from publishing it.

According to the observations made at Yap, Western Carolines, this shallow depression was situated on the 18th in the neighborhood of the Pelew Islands; on the 22d and the 23d it traversed Leyte, passed north of Cebu and Panay and crossed southern Mindoro; on the 25th it seemed to lie over the China Sea east of the Paracels, not far from 115° longitude E, inclining northward; on the 26th it moved NNE, and on the 27th it was probably situated over the southern part of the Formosa Channel.

Zikawei Observatory supposes that the depression crossed Formosa moving ENE during the night of the 27th to the 28th. After a close examination of the three daily weather maps of Japan and of the observations made in Formosa and on the China coast along the Formosa Channel, we rather believe that this little depression entered the Continent south of Amoy the night of the 27th. In this supposition the track had to be deflected again to NW in the Formosa Channel.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La media mensual de la presión atmosférica es este año para casi todas las estaciones de Filipinas algo inferior á la media de Abril del año próximo pasado. La de Manila se diferencia de la normal de este mes en —0.80 mm. Las máximas presiones se registraron en todas partes el día 15, y las mínimas del 18 al 23.

La temperatura media mensual es en general ligeramente inferior á la del año pasado, siendo las mayores diferencias —1.0° C. y —0.9° C., correspondientes á Manila y S. Isidro, Nueva Écija. Los valores extremos registrados en el Observatorio de Manila han sido 35.2° C. y 20.1° C.

Precipitación acuosa.—Salvas muy raras excepciones, el total de lluvia de este mes para las estaciones de Filipinas es mayor que el de Abril, 1909. En Manila la cantidad de agua recogida en los pluviómetros supera á la normal de este mes en 62.9 mm.

DEPRESIONES Y TIFONES.

En todo el mes de Abril sólo se ha observado una depresión que no nos consta llegase á adquirir el desarrollo de verdadero tifón. Mientras atravesó las Islas Visayas, no era más que una depresión dilatada de muy poca importancia. Una vez en el Mar de China se notó algo más su influencia en algunas estaciones del Archipiélago; pero los datos adquiridos son tan pocos, que no podemos dar á su trayectoria más que un valor algo probable, y por esta causa nos abstendremos de publicarla.

Según las observaciones de Yap, esta pequeña depresión se hallaba el día 18 en los alrededores de Palaos; durante los días 22 y 23 pasó á través de Leyte, por el norte de Cebú y Panay y por el sur de Mindoro; el día 25 parece probable que se hallaba en el Mar de China al este de Paracels, no lejos de 115° Long. E, inclinándose al norte; el 26 se movió al NNE, y el 27 demoraba en la parte sur del canal de Formosa.

Según el Observatorio de Zikawei, esta pequeña depresión cruzó Formosa la noche del 27 al 28 en dirección al ENE. Sin embargo, habiendo examinado con mucho cuidado los tres mapas del tiempo diarios de Japón y las observaciones hechas en Formosa, Pescadores y en la costa de China á lo largo del canal de Formosa, nos parece más probable que penetró aquella noche en el Continente por el sur de Amoy después de haber cambiado de nuevo de dirección en el canal de Formosa. Al entrar en el Continente debía de moverse al NW.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Air temperature.[2] Maximum.	Air temperature.[2] Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Evaporation.[2] Shelter, total.
	mm.	*°C.*	*°C.*	*°C.*	*°C.*	*°C.*	*°C.*	*°C.*	*°C.*	*°C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	758.94	27.5	34.9	21	28.1	30.1	28.6	29	27.7	27.5	62.8	16.2	9.2	6.7
2	59.30	26.5	33.6	20.3	28	29.2	28.7	28.7	27.8	27.5	68.1	17.2	6.3	4.8
3	59.10	27	33.7	21.3	27.6	29.6	24.4	28.8	27.7	27.5	70.7	18.4	6.8	5
4	58.40	27.5	33.6	23.6	28.7	29.7	28.6	29	27.8	27.5	67.4	18.1	6.9	4.4
5	58.80	25.8	30.7	21.1	28.1	29	28.7	28.6	27.8	27.5	73.5	18	3.8	3
6	59.19	26.6	32.5	22.3	27.4	29	28.3	28.6	27.8	27.5	70.2	18	5.8	4.5
7	59.27	26.7	34.5	20.7	27.2	28.8	28.3	28.4	27.8	27.5	66.5	16.8	6.5	5
8	58.86	26.8	33.8	20.4	27.4	29.3	28.2	28.5	27.8	27.5	69.2	17.8	7	5.2
9	58.48	27	33.8	20.1	27.8	29.9	28.3	28.6	27.8	27.5	69.5	18	7.5	5.3
10	58.54	27.7	34.6	21.4	28	30	28.5	28.8	27.8	27.6	67	18	7.4	5.2
11	58.55	28	34.6	22.7	28.8	30.6	28.8	29	27.9	27.6	71.3	19.7	6.6	4.8
12	58.42	27.4	33.9	22.1	29	31	29.1	29.4	27.9	27.6	69.2	18.5	6.8	5.2
13	59.01	27.7	34.2	21.7	28.8	31	29.1	29.6	27.9	27.5	63.9	17.3	8	6
14	59.52	28	35	21.4	28.9	31.2	29.3	29.6	28	27.5	62.4	17	8.5	6.1
15	60.21	27.1	33.7	21.4	28.9	31	29.4	29.7	28	27.5	68.4	18.1	6.7	5.1
16	59.26	28.5	35.2	22.3	29	31.3	29.5	29.8	28	27.6	65.7	18.4	7.9	5.8
17	58.33	28.1	34.2	21.7	29.3	31.2	29.7	30	28	27.5	68.2	18.9	6.7	5
18	56.89	28.6	34.2	24	29.9	32.1	29.8	30.2	28.1	27.7	76.4	22	5.9	4.5
19	56.91	28.1	32.6	24.8	30.1	32	30.1	30.4	28.2	27.7	75.9	21.2	5.5	4.1
20	57.18	28.7	35	24.9	30	32.1	30.1	30.4	28.2	27.6	71.6	20.6	6.2	4.7
21	57.04	27.9	33.7	24	30	32.2	30.2	30.5	28.3	27.7	75.3	20.9	5.5	3.7
22	56.85	27.8	33.3	24.6	30	31.4	30.3	30.3	28.4	27.8	75.2	20.7	4.1	3.1
23	57.01	26.5	33.1	23.4	29.1	30.2	29.9	30	28.4	27.7	81.6	20.9	1.9	1.7
24	57.45	23.7	25	22.4	28.1	27.9	29.5	28.2	28.2	27.6	96.1	20.9	2.4	3
25	58.65	24.8	28.1	22.6	27	27.6	28.6	28.4	28	27.5	93.6	21.7	.1	.7
26	59.15	27.1	34.2	22.3	27.2	29.6	28.4	28.7	28.4	27.8	79.3	20.7	4.2	3.1
27	59.47	27	33.5	23.6	28.1	29.8	28.7	29	28.3	27.7	81.9	21.5	3.1	2.1
28	59.39	27.9	34	23.2	28.6	30.2	28.9	29.2	28.5	27.8	71.8	19.6	6.3	4.8
29	59.70	27.4	34.4	22	28.7	30	29.1	29.4	28.4	27.8	70.8	19	5.2	4.2
30	59.50	27.2	34.1	22.4	28.3	30	29.1	29.5	28.4	27.9	72.9	19.3	5	4.2
Mean	758.58	27.2	33.4	22.3	28.5	30.2	29.1	29.3	28	27.6	72.5	19.1	5.8	4.4
Total													173.8	131
Departure from normal	—0.80	—1.0	—0.4	—0.5							+2.8	—0.4		

Date.	Wind. Prevailing direction.	Wind. Total movement.	Wind. Maximum hourly velocity.	Wind. Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0–10.*			*h. m.*	*mm.*	
1	SE	246.5	23.5	SSE	3.2	Ci.	Cu. E	10 10		≡° a.
2	SE	176.5	17	WNW	4.3	A.-Cu. SEbyE	S.-Cu. EbyN	6 45		
3	E, W quad.	158	20	NNE	4.1	Ci.	Cu.	9 15		≡° a. d° p.
4	ESE	205	27	ENE	8.2	A.-Cu. SEbyE	S.-Cu. ENE	3 00		≡° p° a.
5	SE quad.	122	16	SEbyE	6.8	A.-Cu.	S.-Cu. E	3 50	1.1	d p.
6	ESE	174.5	20.5	ESE	7.9	Ci.-S. SW	S.-Cu. E	3 45		d° p.
7	ESE	201.5	20.5	E	5	Ci.	Cu. ESE	9 55		≡° a. p.
8	ESE	253	22.5	SE	3.6	Ci.	Cu.	8 40		≡° a. p.
9	SE	252	23.5	ESE	2.2	A.-S.	Cu.	11 05		≡° a.
10	SE, ESE	225.5	19	W	1.3	Ci.	Cu.	10 45		≡° a.
11	SE quad.	179.5	17.5	SE	3.5	Ci.	Cu. E	9 45		⊤° ◟° p.
12	SE quad.	203	23	ESE	3.2	Ci.	Cu.	10 00		◟° p.
13	ESE	225	22.5	SSE	4.8	Ci.	Cu. ENE	10 10		
14	ESE	219	24.5	SEbyS	2.1	Ci.	Cu. E	10 55		≡° a.
15	SE	198.5	21.5	W	6.1	A.-Cu. ESE	S.-Cu.	5 45		≡° a. ◟° p.
16	ESE	249	24	SEbyE	4.2	A.-Cu.	Cu. E	9 35		≡° a. p.
17	W quad.	210	19.5	WNW	2.5	Ci.	Cu.	11 35		≡° a.
18	SW quad.	286	28.5	SW	3.3	A.-Cu. NNE	Cu. NbyE	10 30	5.1	≡° a. ● p.
19	NE quad.	280.5	24	WSW	9.7	Ci.-S. SWbyS	Cu. N	6 55		≡° a. ⊕ ◩ ◟ p.
20	ESE	207.5	16	NNW	8	Ci.	S.-Cu. NW	6 55		≡° d° a. ◩ p.
21	SE quad.	208.5	20	W	9.1	Ci.	Cu.-N. NW	7 10		≡° a. ◩° ○° p.
22	E quad.	145.5	17.5	WNW	9.6	Ci.-S. SSE	S.-Cu. SE	2 40	1.3	≡° a. p² ∪ ◟° p.
23	NE quad.	178.5	22	W	8.1	Ci.-S. SSE	Cu. E	5 20	4.3	≡° a. ● ◩° ◟° p.
24	N quad.	188	16	NNW	10		N	0 00	61.8	● a. p.
25	SE	149.5	15	SE	10	Ci.-S.	N SbyW	0 00	20.5	● a. d p.
26	SE	150	15.5	EbyS	6.4	Ci. SW	Cu.	7 40		Ω a. ◩ d° p.
27	Variable	88.5	13.5	SSW	8.8	Ci-S. WSW	Cu.-N.	4 10		◩° p.
28	ESE	196	22	SE	3.4	Ci.	Cu. E	11 15		Ω ≡° a.
29	ESE	195.5	17.5	NNE	6	Ci.	Cu. E	6 25		◩ p.
30	ESE	176	16.5	NbyE	5.8	Ci.-S.	N.-cf. E	7 20		Ω a. ◟° p.
Mean		198.3	20.2		5.7			7 22		
Total								221 15	94.1	
Departure from normal		—39.0			+ 1.7			—44 37	+62.9	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3] Mean.	Maximum.	Minimum.	Relative humidity (mean).[3]	Wind.[3] Prevailing direction.	Force (mean).	Clouds.[3] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.05	27.5	30.9	23.3	77.8	NNE	1.8	9.2	Ci.-S.	Cu.-N. E	------	
2	57.56	27.5	31.7	22.5	77.4	NNE	1.4	8.8	Ci.-S.	Cu.-N. E	------	
3	57.51	26.6	28.7	23.3	80	N quad.	1.4	9.6	A.-S.	Cu.-N. E	------	
4	56.57	26.6	30.8	23.1	82.2	N quad.	2.2	9.4	A.-S., Ci.-S.	N. E	17	d° a. ● ⌐◹ p.
5	56.83	27.2	30.8	23.8	81.6	N quad.	1.8	7.2	Ci.-S.	Cu.-N. E	1.8	d° a.
6	57.28	26.6	31.2	23	83.4	Variable	1.6	9.2	Ci.-S.	Cu. SE, E	25.1	d a. ●² ⌐◹ ◺ p.
7	57.41	27.6	31.5	23	74.8	NNE, SE	1.8	8.2	Ci.-S. W	Cu.-N. E	------	
8	57.69	26.1	29.9	22.2	82.4	N quad.	1.6	8.4	Ci.-S.	Cu.-N. E	26.5	d° a. ●² ⌐◹² p.
9	57.45	26.8	31.7	22.8	82	NNE	1.6	6.8	Ci.-S. SW, W	Cu. E, NE	------	
10	57.37	26.9	31.5	22.5	81.8	Variable	1.6	6.6	Ci.-S.	Cu.-N. NE, E	.5	d a.
11	57.48	27	32.4	21.4	77	NW	1.8	5.4	Ci.-S. SW	Cu. E, NE	------	
12	57.14	27.3	32.9	21.8	74.8	Variable	2	6.2	Ci.-S.	Cu. NE, E	------	
13	57.52	27.2	31	22.6	78	NNE	1.4	9.4	Ci.-S.	Cu.-N. E	------	
14	57.97	27.3	30.3	23.8	79.8	NNE	1.4	9.4	Ci.-S.	Cu.-N. E	8.2	d a. ● p.
15	58.82	27.1	30.7	22	80.1	NNE	1.4	9.6	Ci.-S., A.-Cu.	Cu.-N. E	------	
16	58.07	27.7	30.6	23.1	77.8	SE	1.4	7.4	Ci.-S. SW	Cu.-N. E	------	
17	57.64	27.1	32.4	21	77.6	Variable	2	6	Ci.-S.	Cu. E	------	
18	56.43	27.8	33	23.3	79.6	SE	2.2	9	Ci -S.	Cu.-N. E	------	
19	55.84	28.1	33.2	23.7	78.2	Variable	2.2	8.6	Ci.-S. NW	Cu. E	------	
20	56.04	27.7	31.8	23.1	77	SE	1.4	8.6	Ci.-S. SW	Cu. NE quad.	------	
21	55.64	27.5	32.7	23.2	78.6	SE	1.8	9.2	Ci.-S. SW	Cu.-N. NE quad.	72.6	
22	55.89	24.7	27.4	20.7	84.5	N quad.	2.8	10	Ci.-S.	N N quad.	8.8	●² a. d p.
23	55.98	26.6	30	23	81.6	SSW	2.6	9.6	Ci.-S. SE	Cu.-N. NE, SSW	------	
24	57.37	27.6	31.1	25	83	SE	1.4	9.6	Ci.-S.	Cu.-N. SE	------	
25	58.16	27.8	32.5	24.5	78.8	SE	1.4	7.2	Ci.-S. SW	Cu. SE, E	------	
26	58.13	27.9	32	24.4	79.6	SE	1.8	5.8	Ci.-S. SW, NE	Cu. E	------	
27	57.91	27.9	34.2	23.2	76.7	SE	1.4	6.8	Ci.-S. W	Cu. E	------	◹ p.
28	58.11	27.9	32.2	24.1	77.6	SE	1.6	7.2	Ci.-S. SW	Cu.-N. E	------	d ┼° a.
29	58.31	27.4	31.1	23	79.3	Variable	1.4	8.4	Ci.-S.	Cu. E	8.6	● ◹ ┬p.
30	58.30	27.3	31.8	23.3	78.4	NE quad.	1.6	7.2	Ci.-S. SW	Cu. E	3	● a.
Mean	757.32	27.2	31.4	23	79.4	----------	1.7	8.1	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	172.1	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*					*mm.*	
1	758.43	25.8	30.4	22.6	86.3	E quad.	1.5	7.7	Ci., Ci.-S.	NE	N.-cf.	ENE	13.2	≡ Ω² ⌒ a. ●° p.
2	58.48	26.2	30.5	23	87	NE quad.	1	8.3	A.-Cu.	E	Variable	NE	55.9	● a. ∞ d° p.
3	58.01	25.2	26.6	23.9	93.8	NNE, NE	.2	9.2	A.-S.		Fr.-N.	E	33.7	● a. p.
4	57.42	26.2	30.1	23.7	88.3	E quad.	1	8	A.-Cu., Ci.-S.	NE	N.-cf., Cu.	E	24.6	●° a. ∞ Ω° p.
5	57.92	26.3	30.6	23.5	88.5	E quad.	.7	6.7	Ci.	NE	N.-cf.	E	13.2	●² a. ∞ ●° p.
6	58.44	24.9	28.6	23.1	94.5	E quad.	.3	8.7	Ci.-S.	NE	N.-cf.	E	36.6	●° ●² a. ●² Ω° p.
7	58.50	26.3	30	23	86.6	E quad.	.3	6.7	Ci.	NNE	Cu.	E	12.7	Ω° a. p.
8	58.30	25.1	28.8	23.9	92.2	NE, ENE	.2	9.2	A.-Cu.		Fr.-N.	ENE	30.5	●² a. ●° p.
9	58.28	25.7	29.1	22.2	89.2	Variable	.3	4.7	Ci.	N	Cu.	E	2.3	●° Ω² ≡ a. Ω² p.
10	58.16	26.4	30.5	23.7	86.3	E quad.	.7	5	Ci.	NE	Cu.	E	5.6	Ω° ● a. Ω² p.
11	58.36	26.6	30.1	23	83.7	E quad.	.7	4.3	Ci.		Fr.-Cu.	NE	13.7	●° a. Ω° p.
12	58.11	26.2	29.7	22.6	85.3	N quad.	.7	5.5	Ci.	NE	Cu.	E	1.3	●° a. Ω° p.
13	58.75	25.3	28.3	23.8	90.8	EbyN, ESE	.2	9.2	A.-Cu.		Fr.-N.	NE	22.4	Ω° ●° a. ●° p.
14	59.24	25.2	29	22.7	89.3	E quad.	.7	9.8	Ci.-S.		Fr.-N.	NE	21.3	● a. p.
15	60	25.4	28.4	22.1	86.5	NW	0	8.7	A.-Cu.	SE	S.-Cu.	SE	------	d a. Ω° p.
16	59.16	26.2	30	22.3	83.7	NE quad.	.7	5.2	Ci.		Fr.-Cu.	E, NE	------	Ω² a. p.
17	58.16	25.5	28.8	22.2	90.2	NW	.3	6	Ci.		Fr.-Cu.	NE	2.5	Ω²≡●°a.∞Ω²p.
18	57.09	26.3	29.6	23.2	87.8	ESE, NW	.3	6	Ci.-S.	NE	Fr.-cu., S.-cu.	NNE	------	Ω² ≡ a. ∞ ∪ Ω²p.
19	56.90	26.2	30.2	22.7	86.7	NW	.3	5.5	Ci.	N, NE	Cu.	N, NE	------	Ω² ≡ ∪ a. ∞ Ω² p.
20	57.20	25.8	29.3	21.9	87.6	Variable	.7	5.7	Ci.-S.	N	Cu.	NE	------	Ω² ≡ a. ∞ Ω° p.
21	56.29	25.6	28	23.5	91.4	NW, NNW	.5	9.7	Ci.-S.		Fr.-N.	NE	50.1	Ω² ● a. ● p.
22	55.75	25.4	27.6	23.4	88.3	SbyE, W	.2	10	Ci.-S.		Fr.-N.	SW	8.1	● a. Ω² p.
23	56.89	26.5	31.5	22.6	84	WbyN, W	.3	9	A.-Cu.		S.-Cu.	SW	------	Ω a.
24	58.23	26.9	30.4	23.8	85.3	NW	.2	7.2	Ci.-S.	NE	Cu.		------	Ω² a. ┬ Ω² ∞ p.
25	59.01	26.8	31.2	23.4	86.1	ENE	.7	2.2	Ci.-S.		Cu.		------	Ω² ≡ a. Ω² ∞ p.
26	59.22	26.6	31	23.8	87.9	EbyS, NNE	.2	3.8	Ci.-S.		Cu.	ENE	7.6	Ω² a. ● ∞ p.
27	59	27.3	31.5	23.8	86.3	N quad.	.7	3.8	Ci.		Cu.		------	Ω² a. p. ∞ p.
28	59.24	27	30.5	23	85.7	E quad.	.7	4.5	Ci.-S.	NE	Cu.	E	------	Ω² ≡ a. Ω² ∞ p.
29	59.24	26.8	30.7	23.4	84.4	E	.5	4.2	A.-Cu.	NE	Cu.	E	3.6	Ω² ≡ a. ●° ∞ p.
30	59.32	25.8	30.4	23.1	87.9	E quad.	.5	6	A.-Cu.	NE	Cu.	E	24.1	Ω² ● ≡ a. Ω² p.
Mean	758.24	26	29.7	23.1	87.7	----------	.5	6.7	----------		----------		------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------		----------		383	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.				Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.		Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*					*mm.*	
1	758.16	27.8	30.4	25	68.9	NE quad.	11.7	4.5	A.-Cu.	ESE	Cu.	ENE	------	☊ ☇ a.
2	58.40	27.2	30.5	23.8	70.5	NE quad.	9.6	4.7	Ci.-S.		Cu.	ENE	------	☊ a.
3	58.09	26.1	28.4	24	75.3	NE	7.1	7.7	Ci.-S.		Cu.-N.	NE	------	☊ ☇ a.
4	57.30	26.6	29.8	24.3	75.2	NE quad.	10.7	6.2	A.-Cu.		Cu.	ENE	6.4	☊ a. ●° p.
5	57.95	27	30.4	24.1	71.9	NE quad.	10.9	5.3	Ci.		Cu.	ENE	.5	● a.
6	58.24	27.1	30.8	24.1	72.7	NE quad.	11.8	4.5	Ci.		Cu.	ENE	.8	☊ a. ●° ○ p.
7	58.27	27.2	30.5	24	70.2	NE quad.	10.9	3.3	Ci.		Cu.	ENE	------	☊ a.
8	58.23	26.1	30.6	22.7	74.2	NE quad.	9.7	5	Ci., Ci.-S.		Cu.	ENE	11.2	☊² a. ☇ ● p.
9	58.13	26.6	30.5	22.3	72.2	E	8.5	4	Ci.		Cu.	ENE	5.6	≡° ● a.
10	57.99	27	30.2	23.6	72.5	E, NE	10.2	3.2	Ci.		Cu.	ENE	------	● a.
11	58.15	27	30.5	23.5	68.8	NE quad.	10.9	2.2	Ci.		Cu.	ENE	------	☊ a.
12	57.97	26.9	30.5	23.3	68.3	E	10.6	2.3	Ci.		Cu.	ENE	------	☊ a.
13	58.58	27.5	30.5	24	69.5	NE, E	11.1	5.8	Ci.-S.		S.-Cu.	ENE	------	☊ a.
14	59.12	27.3	30	24.9	71.2	E	12	6	A.-Cu.	ESE	Cu.	ENE	.3	☊ ● a. ☇ p.
15	59.83	27.5	29.9	25	70.8	NE quad.	7.2	6.5	A.-Cu.		S.-Cu.	ENE	------	☊ a.
16	58.93	27.5	30.5	25	70.2	E	10.3	4.2	Ci.		Cu.	ENE	------	☊ d a.
17	58.09	27.2	31.4	23.2	67	Variable	7.7	2.2	Ci.		Cu.	ENE	------	☊ ≡° a.
18	56.83	27.6	31	22.9	70.2	NE quad.	8	4.5	Ci., Ci.-S.		Cu.	ENE, N	------	☊ a. ○° ◡ p.
19	56.64	27.1	31.5	22.9	70.3	Variable	6.3	3.5	Ci.		Cu.	NNW	.3	☊ a. ●° ◡° p.
20	56.80	27.5	31.5	23.5	68.6	E	12.1	4.7	Ci., Ci.-S.		Cu.	NNE	------	☊ a.
21	56.33	27.9	32.1	24.3	63.9	NE quad.	10.6	6	Ci.	SE	Cu.	NNE	33.5	☊ a. ☇ ● p.
22	55.96	24.4	27.1	21.6	84.8	W	4	9.8	Ci.-S.		N.	N quad.	20.1	≡ ●² a. ●° ◡ p.
23	56.15	25.8	29	23.6	79.7	SW	7.6	7.8	Ci.-S.		Cu.-N.	SW quad.	36.6	● a. d a. p.
24	57.99	26.8	30.6	23.8	76.8	SW	6.9	7.8	Ci.-S.		Cu.	SSW	------	● d a. ◡ p.
25	58.82	27.5	30.5	24.9	73.3	E	7.8	4	Ci.-S.		Cu.	ESE	------	☊ ☋ a.
26	59.06	27.5	30.5	24	71.9	E	9	2.5	Ci.		Cu.	E	------	☊ a. ☇ p.
27	58.74	28.2	30.6	25.1	69.2	NE quad.	10.7	2.2	Ci.		Cu.	E	------	☊ a.
28	58.92	27.8	30.4	24.5	70.8	NE quad.	10.2	2.7	Ci.		Cu.	E	------	☊ a.
29	59.05	27.8	31	25.4	69.8	E	10.3	3	Ci.		Cu.	E	------	☊ a.
30	59.11	27.6	30.4	24.5	70.2	NE quad.	9.5	3.3	Ci.		Cu.	E	------	☊ a. ☇ p.
Mean	758.06	27.1	30.4	23.9	71.6		9.5	4.6					------	
Total	------	------	------	------	------								115.3	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*					*mm.*	
1	758.24	27.8	32.7	24.4	70.7	NE, N	----------	4.7	Ci., Ci.-S.		Cu.		------	
2	58.59	28	33	24.4	69	NE	----------	5	Ci.-S.	E	Cu.	NE	------	
3	58.38	26.4	31.5	23.4	80	N	----------	7.8	A.-Cu., Ci.-S.		Cu.	NE, N	3.8	d ● p.
4	57.40	27	31.8	23.6	80.2	NE	----------	8.7	A.-Cu., Ci.-S.		Cu.	E	------	d a. p.
5	57.89	27	31.6	24.5	78.8	NE	----------	7.2	A.-Cu.	E	Cu.	ENE	.3	☇ p.
6	58.36	27.3	32.5	24.2	77.6	NE	----------	5.2	Ci.		Cu.	NE	.5	● a.
7	58.46	27.9	33	23.9	71.7	NE	----------	4.3	Ci., Ci.-S.		Cu.		.5	● a.
8	58.55	27.4	32.1	24.4	74.3	NE	15.2	5.2	Ci.		Cu.		.3	●° a. p.
9	58.23	27.7	32.5	24	71.8	NE, N	14.2	6.5	Ci.-S.	NE	Cu.	NE	------	
10	58.12	27.7	32.6	24.7	73.8	N	14.3	3.5	Ci.		Cu.		------	⊤ ☇ p.
11	58.18	27.7	32.5	23.4	69.5	NE	14.4	2.2	Ci.		Cu.		------	
12	58.17	27.3	33	23.5	69.5	NE, N	12.3	2.5	Ci.		Cu.	NE	------	☊ a.
13	58.74	27.3	31.7	23	69.3	NE	15.2	4.8	A.-Cu.	E	Cu.		------	
14	59.10	27.8	32.8	24.9	74.3	NE quad.	15.1	5.3	A.-Cu.	E	Cu.	NE	.3	●° a. d ☇ p.
15	59.65	28.3	33	24.9	70	NE	13.2	7.8	A.-Cu.	E	Cu.		------	d p.
16	58.99	28	31.8	24.9	68.8	NE, N	14.3	5.3	A.-Cu.		Cu.	NE	------	
17	58.33	27.6	32.6	23.4	69.7	E	10.9	3.3	Ci., A.-Cu.		Cu.	ENE	------	
18	57.28	27.5	33.4	22.5	70	E	8.1	4.2	Ci.		Cu.		------	☊ a. ◡ p.
19	57	27.6	34.4	22.3	70	NE	7.7	5.5	Ci., Ci.-S.		Cu.		------	☊ a.
20	57.26	28	33	23	66	NE	11.8	5.7	Ci.		Cu.		------	
21	56.86	27.6	33.4	21.5	66.7	NE	9.7	5.8	Ci.		Cu.		5.8	∞ a.
22	56.94	25.2	26.5	23.4	84.2	NE	5.3	9.3	Ci.-S.		Cu.		6.4	● a. p.
23	56.74	25.5	29.2	23.5	84.2	NW quad.	6.1	10	Ci.-S.		Cu.		4.8	● a. p. ⊤ p.
24	58.24	25.5	27.2	24.2	84.3	SW	7.9	9.8	Ci.-S.		N.	SW	4.7	● a. p.
25	59.17	26.8	31.6	22.8	77.7	SW	7.1	7.2	Ci.-S.		Cu.		------	⊤ ☇ d p.
26	58.88	28.2	34	23.9	74.2	NE	9.5	3.8	Ci.		Cu.		------	☊ a. ☇ p.
27	58.89	28.4	33.4	24.3	68.8	NE quad.	11.6	2.7	Ci.		Cu.		------	☇ p.
28	58.98	28.2	33.1	23.6	70.7	NE quad.	14.4	4.8	Ci.		Cu.		------	☇ p.
29	59.15	28.5	33.5	24.5	71.2	NE quad.	13	4.3	Ci.		Cu.		.8	●° a. ☇ p.
30	59.02	28.2	32.7	24.6	70.6	NE quad.	13.8	5.5	Ci.		Cu.	NE	------	● a.
Mean	758.26	27.4	32.2	23.8	73.3		11.5	5.6					------	
Total	------	------	------	------	------								28.2	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°C.	°C.	°C.	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.47	27.3	32.7	22.5	70.1	E quad.	6	6.8	Ci., A.-Cu.	Cu.-N. E	2.3	∞ p p.
2	58.57	26.5	31.1	21.2	74.6	NE quad.	6.2	5.8	Ci.-S., Ci.	Cu. E, EbyN	.5	☊° a. ◠ p.
3	58.29	24.8	26.4	22.4	88.8	NW quad.	3.3	9	Ci.-S.	Cu.-N. ENE	7.9	d a. p.
4	57.72	24.8	29.3	22.1	89.7	Variable	3.2	9.3	Ci.-S.	Cu.-N. E	7.6	d ⊤ a.
5	58.20	25.8	29.4	22.8	84.7	SW quad.	5	8.2	A.-Cu. NE	Cu.-N. ESE	------	●° a. ≲ ⊤ p.
6	58.50	25.6	31.4	21.9	84.2	Variable	3.8	6.5	Ci., Ci.-S.	Cu.-N. ENE	5.6	☊° a. ⊤ ⌐◪ ● p.
7	58.51	26.2	32	21.3	78	NE quad.	5.5	4.7	Ci.	Cu. E	------	☊ a.
8	58.56	25.1	30.7	21.3	82.3	N quad.	4.4	6.8	A.-Cu. E	Cu.-N. NEbyE	2.6	☊ a. d° p p.
9	58.24	25.5	31.3	20	82.9	NNW	4.3	5.3	Ci.-S.	Cu.-N. ENE	6.6	☊ a. p d° ⊤° p.
10	58.22	26.5	31.9	21.7	78	Variable	5.2	5.8	A.-Cu.	Cu. E	.5	d° ≡° p a. ≲ p.
11	58.39	25.5	32.5	20.4	78.2	Variable	5.7	3	Ci.	Cu. E quad.	------	☊ ≡° a.
12	58.32	25.7	32	19.8	78.3	Variable	5.4	3	Ci. SE	Cu. E, NE	------	☊ a.
13	58.76	25.7	31.7	21.1	82.3	NE quad.	5.1	8.2	Ci., Ci.-S.	Cu.-N. ENE	3	⊤ ●° ≲ p.
14	59.33	26.6	30.4	23	76.3	NE quad.	5	8.3	A.-Cu. E	Cu.-N. E	------	☊° p° a.
15	59.83	27.4	32	23.1	71.7	SE quad.	6.3	6.5	A.-Cu.	Cu. ENE, E	------	
16	59.07	27.6	33.1	20.6	68.5	NE quad.	5.6	3.3	Ci.	Cu. E	------	☊ a.
17	58.28	25.4	32.3	18.5	79.4	S quad.	4	4	Ci., A.-Cu.	Cu. EbyN	------	☊ a.
18	57.06	26.4	32.4	21.9	78.7	N quad.	5.2	5	Ci.	Cu.	------	☊ a. ⌣ ≲° p.
19	56.80	25.4	31.5	20.6	81.3	NW quad.	4.8	6	Ci.-S. SE	Cu. NbyW	.3	☊° a. p ☋ p.
20	56.90	26.2	32	20.4	80.3	SW quad.	5.4	6.7	Ci.-S.	Cu. ENE	------	☊ a. ⊤ ≲ p.
21	56.61	26	31.8	20.5	79.5	Variable	5.4	7.7	A.-Cu. E	Cu.-N. ENE	29.7	☊° a. p ≲ d° p.
22	56.02	24.2	26.5	23	95	NNW	4.5	10	Ci.-S.	N.	24.7	● a. p. ≡° p.
23	56.49	25.9	29	23.1	87.1	SE quad.	7.1	9.7	A.-Cu. S	Cu.-N. SE, S	1.3	d° p a.
24	58.22	26.6	29.7	23.6	81.1	SSE	5.5	9.7	Ci.-S.	Cu.-N. SE	------	
25	59.05	26	31.8	21.9	80.7	Variable	5.3	6.3	Ci.-S.	Cu. E	------	☊ a.
26	59.14	26.2	32	20.9	79.6	SE quad.	6.3	6	Ci. ESE	Cu. E	------	☊ a.
27	58.93	26.8	32.5	21.7	75.2	NE quad.	5.1	4.7	Ci.	Cu. E, ENE	------	☊ a. ≲ p.
28	59.16	27.1	32.7	22	73.6	NE quad.	4.4	5.7	A.-Cu. E, ENE	Cu. E	------	☊° a. ≲ a. p.
29	59.19	26.2	32	21.8	79.8	SE quad.	5.1	3.5	Ci.	Cu. E	3.3	☊ ≡° a. p ≲ p.
30	59.19	26.1	31.3	21.2	80.9	S quad.	4.9	5.2	Ci.	Cu. ENE	4.1	☊ a. ● ⊤ d° ≲ p.
Mean	758.27	26	31.2	21.5	80		5.1	6.4				
Total											100	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	°C.	°C.	°C.	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.84	27.4	31.8	23.9	78.7	E quad.	0.5	5.5	Ci.-S. SW	Cu. E	------	☊² a.
2	59	27.5	32.6	24	78.2	ENE	.5	4.7	Ci.-S. SW	Cu. ENE	5.1	
3	58.78	24.6	27	23.6	94.7	NW quad.	.5	8.7	----------	N. ENE, EbyN	34.5	● a. p.
4	58.09	25.5	29	23.4	88.2	E	.3	9	----------	Cu.-N. E	7.3	● a. p.
5	58.51	26.3	30	23.7	86.3	E	.2	7.3	Ci.-S. SW	Cu.-N. E	16.5	● a. p.
6	58.88	26.2	29.8	23.8	87.5	ENE	.7	6.2	Ci.-S. SW	Cu., N. ENE	2.8	● a. p.
7	58.98	26.9	32	23.4	83.1	ENE	.3	3.8	Ci.-S. SW	Cu. ENE	------	☊² a.
8	58.86	25.8	29.5	24	87	E	.5	6.3	Ci.-S.	Cu.-N. NE	9	● a. p. ☊² a.
9	58.62	26	28.6	23.3	87.8	N quad.	.2	6	Ci.-S. SW	Cu.-N. NE	18	● a. p.
10	58.58	27.2	31.5	24.2	81.2	ENE	.7	3.7	Ci.-S. SW	Cu. NE, ENE	------	☊° a.
11	58.76	27	31.5	23.5	81	E	.5	1.7	Ci.	Fr.-Cu. E	------	☊² a.
12	58.57	27.3	32	23.4	76	N quad.	.5	2.3	Ci.	Cu. NEbyE	------	☊ a.
13	59.06	27	32.2	24.2	82.7	E, NW	.8	5.8	Ci., Ci.-S.	Cu. ENE	8.7	● a.
14	59.94	26	30	23	86	ENE, SE	1.2	9	----------	Cu.-N. ENE	29.7	d ● a. ●² p.
15	60.35	27.4	31.7	24.2	81.4	E quad.	.5	7.7	Ci.-Cu. SW	Cu. EbyN	------	
16	59.55	27.2	31.9	23.8	80.3	SSE	.7	3.2	Ci.-S.	Fr.-Cu. E	------	
17	58.56	26.9	30.9	23	81	NW	.5	6.7	Ci.-S.	Cu. NEbyE	1.3	● p.
18	57.22	28	33.5	24.8	78	N	.5	6.5	Ci. WSW	Cu. NE	------	⊕° a. ⌣² ☋² p.
19	56.96	27.7	33.3	24.5	77.2	NW, NNE	.7	6.8	Ci. S	Cu., Cu.-N. NNE	------	○° a.
20	57.42	27.3	32.8	23.6	81.5	NW, NE	.5	6.8	Ci. S	Cu.-N. NNE	4.3	● ⌐◪° p.
21	56.88	27.2	31.7	24.2	82.7	NW	.8	8	Ci.-S. S	Cu.-N. NE	56.1	●² ≲ ⊤ p.
22	56.55	24.7	26	23.2	94.2	NNW	1.5	10	----------	N. ENE	40.8	●² a. p.
23	56.67	26.6	30.4	23.3	82.3	WSW	.7	8.2	Ci.-Cu. NE	Cu.-N. S	.5	● a. p. ○° a.
24	58.29	27.5	30.8	24.7	82.3	SE quad.	1.2	8.2	Ci. N, NNE	Cu.-N. S	.8	○² a. p.
25	59.37	27.9	31.3	25	83	SE quad.	1.5	5.3	Ci.	Cu. SSE	.8	● a.
26	59.53	27.6	32	24.2	82.5	Variable	.3	6	Ci. SSW	Cu. E	------	☋² ☊ a. d ⊤ p.
27	59.36	27.8	32.4	24.3	81.2	WNW, SE	.8	3.8	Ci.-S.	Cu. E	8.6	☋² ☊² a. ● p.
28	59.64	26.6	30.8	23.6	84	SE quad.	.7	7	----------	Cu.-N. ENE	4.6	● a. p. ◠ p.
29	59.90	26.1	31.7	24	82.7	Variable	.7	5	Ci.-S.	Cu.-N. ENE	11.2	☊ a. ● a. p.
30	59.84	26.8	31.9	23.4	80.8	Variable	.5	6.3	Ci.-S. SSW	Cu. ENE	.8	☊ a. ● p.
Mean	758.65	26.8	31	23.8	83.1		.6	6.2				
Total											261.4	

METEOROLOGICAL DATA, ETC.—Continued.

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.07	26.8	32.9	22.2	80.8	NE quad.	1.3	3	Ci.	S.-Cu. E	-----	Ω² ≡° a. d p.
2	59.31	26.6	32.7	22.2	83.2	NE quad.	1	5.7	Ci.-S. SE	Cu. ENE	1.3	
3	59.13	24.6	29.2	23.4	92.7	NE	1.2	8.3	A.-Cu. ESE	S.-Cu., N. E, ENE	14.4	●° a. p.
4	58.27	25.9	30.5	22.8	87.9	NE quad.	1	7.2	A.-Cu. SE	S.-Cu. E, ESE	.8	d a. ↘ p.
5	58.78	25.9	32.7	23.3	87	NE	1.3	5.3	Ci.-S.	S.-Cu. E	5.8	≡° a. p p.
6	59.26	26.4	31.9	23.5	85.4	NE quad.	1.3	6.5	A.-Cu.	S.-Cu. E, ENE	2.5	●° a. p° ⊤ ↘ p.
7	59.35	25	30.5	22.3	90.5	N	1.2	6.2	Ci., Ci.-S.	S.-Cu. E, ENE	10.4	≡° a. p a. p.
8	59.10	26.1	33.6	22	85.9	N quad.	1	6	A.-Cu. SSE	S.-Cu. NE	4.1	d a. ⊤ p p.
9	58.98	25.1	29.1	22.1	90	N quad.	1.2	7	A.-Cu. SE	S.-Cu. NE	5.9	d a. ● ⊤ p.
10	58.83	26.1	32	22.7	84.7	N, S	1.3	4.3	A.-Cu. E	Cu. E	-----	p° ↘ p.
11	58.88	26.1	32.2	22.4	84.2	NE, N	1.2	2.8	Ci., Ci.-S.	Cu. E	-----	Ω a.
12	58.75	25.5	32.2	20.7	84.5	N	1.2	2.7	Ci.	Cu. E, NE	-----	Ω a.
13	59.34	26	31.9	22.2	85.2	N quad.	1	4	Ci., A.-Cu.	S.-Cu. ENE	1.8	Ω a. p ↘ p.
14	59.86	25.8	29.7	22.7	84.9	N	1	6.5	A.-Cu. E, SE	S.-Cu. E	1	Ω p° d a. ↘ p.
15	60.49	26.9	34.2	23.4	83.8	N	1	6.5	A.-Cu. SE	S.-Cu. E	-----	≡° a. d ⊽ p.
16	59.76	26.6	33	22.5	83	NE quad.	1.2	4	Ci.	Cu., S.-Cu. ENE	-----	Ω a. ⊽ p.
17	58.71	26.1	31.9	20.5	83.5	N	1.2	3.2	Ci.	S.-Cu. ENE	-----	Ω a. ⊽ p.
18	57.56	26.7	32.9	22.5	80.8	N quad.	1.2	5.7	Ci.-S.	Cu. NE	-----	⌣ p.
19	57.28	26	32.2	21.2	83.7	N quad.	1	6.7	Ci.-S., Ci.	S.-Cu. NE	-----	⊽ ⌣ p.
20	57.40	26.9	33.1	22.6	80.7	N quad.	1	5.5	Ci.-S.	Cu. NE	-----	↘ ⊽ p.
21	57.18	26.4	33.6	21.7	83.8	N	1	7.2	Ci.-S. SE	S.-Cu. NE	4.3	↘ ⌣ p.
22	56.71	24.8	26.8	23.6	93.7	N	.8	9.8	A.-Cu.	N. NE	22.9	d ● a. p.
23	56.66	26.5	30.7	23.1	86.7	S quad.	.8	7.2	A.-Cu. SSE, S	S.-Cu. SE	2.5	⊕ ● ↓ p.
24	58.37	27.2	30.7	24.5	84	S quad.	1.3	9	Ci.-S.	S.-Cu. SSE	-----	↘ a.
25	59.42	27.1	31.9	23.1	84.7	NE, S	.8	4	Ci.-S. N	Cu.	-----	
26	59.75	26.6	33.5	23.1	85.8	Variable	.7	5	A.-Cu.	S.-Cu., Cu. E	2	⊤ p° p.
27	59.48	27.2	33.6	22.5	82.9	N	1	3	Ci.	Cu. E	-----	Ω² a. ⊤ d° ↘ p.
28	59.85	25.5	30.5	23.2	87.8	N, NE	1	6	A.-Cu. E	S.-Cu. E	3.6	⊽ a. ⊤ p° ⌈ ↘ p.
29	59.98	24.6	31.2	21.9	89.7	N, S	1	2.5	Ci.-S.	Cu. E	13.2	Ω a. p² ⊤ ●° ↘ p.
30	59.76	25.6	32.7	21.9	85.7	N	1	3.3	Ci.-S.	Cu. ENE	9.9	Ω a. p ⊤ ↘ p.
Mean	758.84	26.1	31.8	22.5	85.6		1.1	5.5				
Total											106.4	

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p.h.*	*0–10.*			*mm.*	
1	759.17	27.9	31	25.5	76.7	ENE, NE	14.3	2.7	Ci.	Cu. ENE, E	-----	↘° p.
2	59.37	27.7	31	25.3	77.3	NE, E	11	2	Ci.	Cu. E	1.8	↘° p.
3	59.32	24.9	30.6	23.5	88.3	E quad.	10.8	9.5	Ci.-S.	Fr.-N. ENE	35.5	d ● a. p.
4	58.57	26.3	30.5	22.7	84.2	NE, E	14	8	Ci.-S.	Fr.-N. ENE, E	13.2	● d° a.
5	58.82	27.3	30.6	24.5	79.5	NE, E	11.9	3.2	Ci. W	Cu. E	.8	● d ◯ a. ↘° p.
6	59.34	27.4	31.4	24.1	78.5	E, NE	13.7	6.3	Ci.-S., Ci.	Cu.-N. NE	4	◯² a.
7	59.41	26.8	30	23	80.2	ENE, NE	11.2	4.3		Cu.-N. NE, ENE	8.9	d ● ⊕ a. ● p.
8	59.13	27.4	31.3	24	76.4	NE	12.1	2.3	Ci.	Cu. NE	-----	● a. ↘° p.
9	58.94	26.3	29.4	23.1	80.8	NE, E	9.4	3.3	Ci.-S.	Cu.	64.5	d ● a.
10	58.85	27	30.8	23	79.3	NE, E	9.9	1.7	Ci.	Cu.-N. ENE	.3	● a.
11	58.83	27.8	31.8	24.5	78.8	NE, ENE	9.1	1.3		Cu. ENE	-----	↘ p.
12	58.73	27.8	31.9	25.4	74.5	E quad.	9	1.5	Ci. WSW	Cu. ENE	-----	↘ p.
13	59.46	27.6	31.2	24.5	73.5	E, NE	11.4	2.7	Ci.	Cu.	6.6	d° a. ↘° p.
14	59.81	26.9	29.7	24.9	82.2	NE	8.9	4.8	Ci.-S., A.-Cu.	Cu.-N. ENE, E	7.4	d ● a.
15	60.50	27.7	31	25.4	79.2	E quad.	10.9	5.8	Ci., Ci.-S.	Cu. ENE, SE	-----	d a.
16	59.64	28	31.6	25.4	74.3	E, NE	12.7	2.5	Ci.	Cu.-N., Cu. NE	1.3	● d a.
17	58.64	26.9	31.7	22	77.2	E	5.9	1.5	Ci.	Cu. E	-----	↘ p.
18	57.40	26.2	31.7	20.3	77.8	E quad.	5.7	1.3	Ci.	Cu.	-----	↘° p.
19	57.15	26.7	32.6	21.4	77.3	E quad.	5.6	6.3	Ci.-S., Ci. ssw, sw	Cu.	-----	≡° ◯ a. ↘° p.
20	57.44	26.4	32.6	21.1	76.8	E quad.	5.4	5.3	Ci. S	Cu.	-----	≡° ◯ a.
21	57.14	27.2	32.9	21.8	77.5	E quad.	7.6	7	Ci.-S. S	Cu.	-----	≡° ◯ a. ↘° ⌣ p.
22	56.88	27.2	30.9	24.1	81	NE, ESE	12.5	9.3	Ci.-S.	Cu.-N. NE	17.1	● d a. p.
23	56.69	26.1	29	24.1	85.2	E	9.3	9.5	Ci.-S.	Cu.-N. SE	29.2	● d a. p.
24	57.89	26.2	30.3	24	87.3	S,SW	4.4	9.7	Ci.-S.	Fr.-N. S	3.3	● d a. ↘° p.
25	59.32	26.5	32	22.7	85.2	NE, E	5.4	7.2	Ci. NW	Cu. S, SE	4.3	⊤ ● ⌈ ↘ ↘° p.
26	59.47	28.4	31.6	26.4	80.6	NE, E	12.8	2.5	Ci.	Cu.	10.2	d p.
27	59.54	28.1	31.3	25	78.5	NE quad.	10.6	2		Cu.-N. NE	-----	↘° p.
28	59.78	27.9	31.4	25.1	78.8	NE, E	-----	2.2	Ci.	Cu., Cu.-N. E	4	●° a. ↘ p.
29	59.93	27.8	31.9	24.6	78.8	E, NE	-----	5	Ci.	Cu.-N. E	3.8	● a.
30	59.73	27.8	32	25.5	73.2	E quad.	11.2	1.8	Ci.	Cu. NE	2.1	● a.
Mean	758.83	27.1	31.2	23.9	79.3		9.9	4.4				
Total											218.3	

METEOROLOGICAL DATA, ETC.—Continued.

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.38	27.5	30.2	23.8	79.6	NE	23.3	3.8	Ci.	Variable NE	------	☋° a.
2	59.51	27.6	30.7	25.7	78.5	N quad.	17.9	5.2	Ci.	S.-Cu. NE	1.5	☋° a.
3	59.42	27.8	31.3	25.2	78.2	NE	---------	7.7	Ci.	S.-Cu. NE	------	●° a.
4	58.69	27.6	30.7	25.9	80.8	NE	23.5	7.3	A.-Cu. E	Cu. NE	------	↙ p.
5	58.84	28.3	32.5	25.7	76.3	NE	18.6	7.5	Ci.	S.-Cu. NE	------	⌈↙ d ↙° p.
6	59.30	28.4	31.4	26.1	73.5	NE	21.2	8.5	Ci.	S.-Cu. NE	------	↙° a.
7	59.70	28.6	30.9	26.8	72.5	NE quad.	---------	3.5	Ci.	S.-Cu., Cu. NE	------	↙° p.
8	59.33	28.9	32.5	26	72	NE	17.7	3.7	A.-Cu.	Cu. NE	------	
9	58.99	28.8	31.9	25.7	72.8	NE	17	4.5	Ci.	Cu. NE	------	
10	58.96	28.5	31.9	24.3	74	NE	13.8	4.7	Ci.	Cu. NE	------	
11	58.68	28.8	32.7	25.6	76.7	N	13	3.3	Ci.	Cu. NE	------	↙° p.
12	58.64	28.4	33.4	25.2	77	N	12.5	3	Variable NE, N	Cu. NE	------	↙° p.
13	59.49	28.3	33.7	24	74.2	Variable	14.2	2.3	Ci.	Cu. NE	------	
14	59.88	28.8	31.7	26.2	74	NE	---------	6.3	A.-Cu. NE	S.-Cu. NE	------	↙° p.
15	60.47	28.4	29.7	26.2	80	N quad.	20	5.8	Ci.	S.-Cu. NE	1.8	☌ ☋° p.
16	59.59	28.8	33.7	25.4	76.9	NE	13.8	3.2	Ci.	Cu. SE	------	
17	58.54	28.2	33	23.5	75.8	NE, NW	10.5	1.2	Ci.	Cu. NE	------	↙ p.
18	57.34	27.7	34.7	21.8	76.7	SW	10.6	2	Ci.-Cu. N	Cu., S.	------	☌☌° ☋° p.
19	56.93	27.8	32.7	24	81.9	N quad.	11	8.8	Ci.	Cu. N	------	☌☌° ↙° ☋² p.
20	57.26	28.1	33	23.6	79.5	NE, SW	11.5	7.5	Ci.	Cu. NE	------	↙° ◯° a. ☋° p.
21	56.98	29.2	33.7	24	73.7	NE, N	11.9	7	Ci. NW	S.-Cu. NE	------	☌☌° a. ↙ ⌣² ☋° p.
22	57.22	28.7	32	25.7	75.3	NE	18.4	8.8	Ci.	S.-Cu. NE	.8	☌² p.
23	57.09	27.4	30.9	25.2	82.3	NE quad.	21.4	8.3	Ci.-S.	N. NE	16	☋² ☌ a. ☌ ● p.
24	57.26	25.2	27	23.4	90.5	SW	5.7	10	Ci.-S.	S.-Cu., N. SE, S	62	☌° ● a. p.
25	58.72	26.6	29.4	23.4	87.5	S quad.	6.8	9.8	A.-Cu. SSE, S	S.-Cu. S	2	☌ a. ● ⌈↙ ◠° ☋° p.
26	59.37	27.6	31.3	23.6	84.3	NE, SW	10.4	5.5	Ci.	S.-Cu. SE	------	♌² ≡ a. ⌈↙ ☌ ☋² p.
27	59.39	28.1	32	24	80.8	N quad.	12.8	5.5	Ci.	Cu. NE, SE	------	☋°♌°a.☌°⌈↙☋°p.
28	59.58	28.6	32	24.2	77	NE, E	15.3	4.5	A.-Cu. E	Cu. NE	------	☋° a. ↙° p.
29	59.90	29	32	26.8	74.9	NE	16.4	4	A.-Cu. ENE	Cu. NE	------	↙° p.
30	59.76	28.2	32	23.3	76.8	NE	---------	3	Ci.	Cu. NE, E	------	☋² a. ⊤ ⌐↙ ↙ p.
Mean	758.81	28.1	31.8	24.8	77.8	----------	15	5.5	----------	----------	------	
Total	--------	------	------	------	------	----------	---------	---------	----------	----------	84.1	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.98	26.8	32.4	------	-------	E	1.8	3.7	Ci.	Cu. E	------	
2	59.26	26.5	32.7	------	-------	E quad.	2.2	3.3	A.-Cu. ENE	S.-Cu.	------	♌² a.
3	59.10	27.6	34.2	------	-------	E	1.7	5.3	A.-Cu. E	Fr.-cu.,Cu. ENE,NE	1.3	♌° a.
4	58.50	27.1	31.7	------	-------	E quad.	1.8	7.5	A.-Cu. NE, SE	Cu. E	------	☌² a. ◯² p.
5	58.79	27.1	32.2	------	-------	E quad.	1.7	5	A.-Cu. NE	Cu. E	------	♌° a.
6	59.09	27.3	33.2	------	-------	E	2.3	4.7	Ci. SE, SW	S.-Cu. E	------	◯° a.
7	59.24	26.9	32.7	------	-------	E quad.	1.7	3.2	Ci., A.-Cu.	S.-Cu., Cu.-N. E	------	♌° a.
8	58.79	27.4	34.3	------	-------	E quad.	1.5	4	Ci., A.-Cu.	Cu.-N. E	------	♌° a.
9	58.46	27.7	33.5	------	-------	E, NE	1.8	3.2	Ci.	Cu. E	------	♌° a.
10	58.44	28.5	36	------	-------	NW	.8	4.2	Ci.	Cu. E	------	♌° a.
11	58.41	28	35.6	------	-------	E quad.	1.2	4.8	Ci., A.-Cu.	Cu. ENE	.5	⌈↙ d ↙ p.
12	58.16	28.5	35.7	------	-------	SE quad.	1	5.2	A.-Cu. E	Cu. ESE	------	♌° a. ↙ p.
13	59.02	28.3	33.2	------	-------	E	1.5	4.8	A.-Cu. NE	Cu. E	------	♌° a.
14	59.47	28.3	35	------	-------	E	1	3.5	Ci.	Cu. NE, E	------	♌° a.
15	60.23	28.2	34.2	------	-------	NW	.8	4.8	A.-Cu. E	Cu. E	------	♌° a.
16	59.30	28.3	34.7	------	-------	ESE	1.3	5.3	A.-Cu. SE	Cu. E	------	♌° a.
17	58.12	29.2	36.3	------	-------	NW quad.	.8	4.3	Ci. S	Cu. E	------	♌² a.
18	56.71	29.8	36.4	25.4	70.8	NNW	1.2	6.2	Ci.-S.	Cu.-N. NNW	------	⌣² ☋° ↙ p.
19	56.80	29.5	36.2	24.5	69.1	N quad.	.8	8.3	Ci. S, SSW	Cu. NE	------	◯° a. ⌈↙ ⌣² p.
20	57.19	28.8	34.8	23.5	74.8	E quad.	1	8.3	Ci.-S., A.-Cu.	Cu. E, SE	22.9	●² ⊤ ↙ p.
21	56.97	27.6	34.2	23.2	81.5	NW	.7	8.7	Ci.-S.	N. W	------	≡ ♌² ◯° a. ↙ ⊤ p.
22	57.01	28	33.2	24.6	73.8	E quad.	1.8	8.3	Ci.-S. S quad.	Cu. Variable	------	♌² ≡ a. ◯² ⌣² ☋² p.
23	57.26	27.4	33.2	23.4	75.4	E quad.	1.1	7.3	Ci.-S. S	Cu. E	3	♌² ◯² a. ☌° p.
24	57.52	23.8	25.2	23	94	NE	.6	10	Ci.-S.	N. E quad.	47.2	☌² a. ●² ↙ p.
25	58.54	24.3	26.1	22.9	95.3	Variable	.8	10	Ci.-S.	N. SSW	30	●° a. ●² p.
26	59.06	25.8	33.2	22	86.8	SW quad.	.6	6.8	Ci.	Cu., N. SSW	9.2	♌² ≡ a. ● ⌈↙ p.
27	59.34	25.8	32.2	22.5	85.7	SE	.7	6.2	Ci. SW	Cu. S, SE	.5	♌² ☌ a. ☌ ⊤ p.
28	59.37	27.4	32.7	22.6	74.5	E	1.3	3	Ci.	Cu. E	------	♌² a. ↙ p.
29	59.61	27.9	33.2	22	70.2	E	1.3	3.5	Ci.	Cu. ESE	.3	♌² a.
30	59.54	27.6	32.7	22.6	71.6	E quad.	1.7	4.3	A.-Cu. SE, E	Cu. E	------	♌² ☌° a. ↙ p.
Mean	758.54	27.5	33.4	------	-------	----------	1.3	5.6	----------	----------	------	
Total	--------	------	------	------	-------	----------	---------	---------	----------	----------	114.9	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.59	28.5	36.6	23.4	64.7	S	11.6	1	Ci.	Cu.	------	
2	59.12	27.5	35.3	21.3	74.4	SE, NW	10.9	3.5	Ci.	Cu., S.-Cu.	------	
3	59.04	27.7	33.4	22.4	74	SE, NNW	10.5	2.8	Ci.	Cu., S.-Cu.	------	d° p.
4	58.07	28.8	35.2	24.2	69	SE quad.	14.3	5.8	Variable	S.-Cu.	------	
5	58.39	28.1	35.1	22.6	70.8	SE, S	11.3	3.3	Ci.	S.-Cu. SE	------	
6	58.78	28.1	35.1	23	74.2	S, NNW	11.6	4.2	Ci.	Cu.	------	
7	58.89	28.7	36.1	23.5	69.2	Variable	14.4	3.2	------	Cu., S.-Cu.	------	
8	58.76	28.3	34.1	22.8	71.7	SE, NW	10.7	3.3	------	S.-Cu.	1.8	p p.
9	58.23	28.7	36.6	23.1	71.8	SE	9.9	2.3	------	Cu.	------	
10	58.55	28.3	35.2	22.8	73.5	SE, NW	12.7	1.7	------	Cu.	------	
11	58.51	28.1	33.5	22.8	76.7	NW quad.	13.1	2.2	------	S.-Cu., Cu.	------	
12	58.31	28.1	32.8	23.8	79.4	NW quad.	11.9	3.7	------	S.-Cu., Cu.	------	
13	58.91	27.4	34.5	22.8	79.7	Variable	9.7	6.2	A.-Cu.	S.-Cu.	------	⊤ p.
14	59.32	28.7	36.1	23.7	78.3	S, NW	12.3	4.8	------	S.-Cu., Cu.	------	
15	59.97	29	36.4	23.4	76.3	Variable	11.8	3.2	Ci.	Cu.	------	∩ ⊤° ♋° p.
16	59.03	29	36.4	23.4	74.9	SE, NW	11.1	3.8	Ci., Ci.-S.	Cu.	------	d° p.
17	58.23	28.6	34.4	24.4	79.7	SE, NW	12.5	3.7	Ci., Ci.-S.	Cu.	------	♋° p.
18	56.87	29	32.4	26.9	79.2	NW	17.2	4	------	S.-Cu., Cu. NNW	------	≲ ♋ p.
19	56.92	28.7	32.2	26.5	79.7	NW	16.3	5.3	Ci.	S.-Cu. NW	------	♋ p.
20	56.97	29.1	36.6	24.6	76	Variable	9.6	8.5	Variable	S.-Cu., Cu.	------	⊤ ≲ p.
21	56.86	28.3	34.4	22.9	77.9	SE, NW	10.8	5.3	Ci.	Cu.	------	≡° ♌ a. ⌜° ♋° p.
22	56.78	27.7	36.2	24	83.5	E quad.	8.1	7	Ci., Ci.-S.	S.-Cu. SSE	8.4	≲ ⊤ p ● p.
23	57.08	27.4	34	23.2	82.8	Variable	9.5	9	Ci.-S.	S.-Cu.	------	♋ ♋ a.
24	57.18	27.5	34.4	24	81	S quad.	10.2	9	A.-Cu.	S.-Cu.	.5	d° ∩ ≲ p.
25	58.03	24.6	26.8	23.4	94.5	SE	15.9	9.8	------	S.-Cu. SE	16.8	d a. ● p.
26	58.82	27.6	35.2	23.3	80.2	SE quad.	12.2	6.5	A.-Cu.	S.-Cu.	------	⊤ d° p.
27	59.19	27.6	35.8	23.2	82.1	Variable	8.8	5.3	Ci., Ci.-S.	S.-Cu.	------	≲ p.
28	59.20	29.3	36.6	23.5	74.7	SE, N	9.9	4.3	A.-Cu., Ci-S.	Cu., S.-Cu.	------	≲ ⊤ p.
29	59.43	29.1	36.9	23.8	72.2	Variable	12.3	2.7	Ci.	Cu.	------	
30	59.25	29	36.8	23.9	73.5	SE, S	11.7	3.7	------	Cu.	4.8	p ≲ p.
Mean	758.38	28.2	34.8	23.6	76.5	------	11.8	4.6	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	32.3	

BAGUIO.

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	636.68	18.6	26	14.4	69.9	W	15.6	3.4	Ci.	Cu.	------	♌ a. ∞ p.
2	37.01	18.1	24	14.5	81.8	Variable	11.1	6.1	Ci.	S.-Cu. WSW	------	∞ d p.
3	36.98	18	24.5	15	91.3	W quad.	14.1	6.7	Ci.	Cu. ENE	------	♌ a. ≡° p.
4	36.42	19	25.5	15.9	79.3	E	16.7	6.6	Ci.	Cu.	------	♌° a. ≡² ♍.
5	36.52	18.6	24.6	15.5	78.8	W quad.	12.9	5.3	Ci.	Cu.	------	≡ ⊤ p.
6	36.89	19	24.4	15.5	76.8	E	14.3	6.3	Ci.	Cu.	------	♌ a. ≡° p.
7	37	19.1	25.6	15	74	E, SE	16.1	4.6	Ci.	Fr.-Cu. SW	------	
8	36.85	18.5	24.4	15.3	87.2	W	10.5	7.3	------	Fr.-N.	------	♌ a. ≡² p.
9	36.49	18.3	24.1	15.4	88.2	Variable	13.1	6.4	------	Fr.-N. W	------	♌ a. ≡ a. p.
10	36.70	18.3	25.4	15.2	83.6	Variable	11.5	5.9	Ci.	Fr.-N. W	------	♌ ≡ a.
11	36.69	18.7	25.4	15.8	83.6	W quad.	11.2	6.3	------	S.-Cu. W	------	♌ a. ≡ p.
12	36.44	18.7	25.6	15.2	82.1	W quad.	10.9	6.7	Ci.	Cu. SW	------	♌ a. ≡° ⊤ p.
13	36.91	18.4	24.8	15.5	85.2	WSW, E	11.9	9.6	A.-Cu.	S.-Cu., Fr.-N. ESE	12.2	♌ a. d ● p.
14	37.48	18.2	23.3	15.9	87.2	E quad.	13.3	7.1	A.-Cu.	Fr.-Cu. E	9.6	≡² ● d p.
15	38.23	18	23.1	16	92.3	Variable	14	7.1	Ci.	Fr.-N. N	5.3	≡² ⊤ ● p.
16	37.39	18.4	23.8	16.9	89.5	E	10.2	7.7	Ci.	S.-Cu. SW	.3	≡² ● d ⌜ ⊴ p.
17	36.64	19.3	24.7	15.8	89.3	W quad.	9.8	7.3	Ci.	Cu.	------	⊤ ≡² p.
18	35.52	19.7	25.2	16.3	87.6	W quad.	10.3	6.9	Ci.	Cu. NE	------	≡² a. ⌜ ⊴ ≡ p.
19	35.34	19.3	24.9	16.5	87.1	WSW	10.8	7.1	Ci.	Cu.	------	≡² a. p. ⊤ p.
20	35.59	19.1	26.2	16.3	83.4	W	13.4	7.4	Ci.	Variable	2	≡ a. p. d ● p.
21	35.34	18.7	24.9	16	84	W	11	7.9	Ci.	S.-Cu. S, W	------	∞ a. ≡° p.
22	35.11	17.2	23.2	15.6	91.8	E	13.8	8.3	Ci.	Fr.-N, S.-Cu. W, SE	29.2	♌ a. ⌜ ⊴ ● ∩ ≡ᶜ p.
23	35.35	18	22.7	15.4	81.5	E	13.2	9.6	Ci.-S.	Fr.-N.	21.8	○° a. ≡ ●² ⊤ p.
24	35.38	17.3	21.8	15.7	86.7	E quad.	27.3	9.9	Ci.-S., A.-S.	Fr.-N.	6.6	d a. p.
25	35.62	15.9	17.8	15	96.5	SE quad.	23.8	10	------	N. E quad.	27.4	d ● a. p.
26	36.92	18.2	23	15	88.6	SE quad.	17.6	8.9	Ci.-S.	Fr.-Cu. SSE	------	○ a.
27	37.37	18.1	23.3	16.4	85.8	E	15.4	8	Ci.	Cu. SSE	27	♌ a. ⊤ p. ● ≡
28	37.53	18.6	24.5	16.2	86.3	E quad.	11.6	6.9	Ci.-Cu.	Cu.	29.7	≡ ● ⊤ p.
29	37.78	18.4	22.9	16.3	88.5	Variable	11.1	6.7	Ci., Ci.-S.	Variable	1.5	● ≡ p.
30	37.54	18.9	24	15.6	81.3	E	15.3	5.3	------	S.-cf. E	1	● ∩ ≡² p.
Mean	636.59	18.4	24.1	15.6	85	------	13.7	7.1	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	173.6	

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.68	27.9	33.6	23.6	73.5	N quad.	1.2	0.2	Ci.	Cu.	------	≡° a.
2	59.28	27.8	32.8	24	72	Variable	1.3	.7	A.-Cu., Ci.	Cu.	------	
3	58.93	28	33.1	24.6	71.2	Variable	.8	1.3	A.-Cu.	Cu.	------	⌐◪ ⌒ p.
4	58.35	28.2	33.1	24.8	72.2	W	1.2	3.2	Ci.-S.	S.-Cu., Cu.	------	
5	58.42	28.7	34.3	24	68.2	Variable	1	1.7	Ci.-S., A.-Cu.	Cu.	------	
6	58.78	29.1	33	25.6	70.1	N quad.	1.3	1.3	A.-Cu.	Cu. NE	------	⌒ a. ↙° p.
7	59.05	28.6	33.6	25.9	66.4	Variable	1.7	1.3	Ci.	Cu. NE	------	
8	58.81	28.3	33.5	24.8	71.8	Variable	1	1.2	Ci.-S.	S.-Cu., Cu.	------	
9	58.27	28.4	32.6	25.4	73.8	S quad.	1.2	.2	Ci.	Cu.	------	
10	58.82	28.1	33.2	24	72	Variable	1	2.2	Ci.-S.	Cu.	------	
11	58.68	27.2	34	22.4	68.7	N quad.	1.5	0	Ci.-S., A.-Cu.	Cu.	------	↙° p.
12	58.42	27.4	33.9	22.7	69.8	Variable	1	1.7	Ci.-S., A.-Cu.	S.-Cu.	------	↙° p.
13	58.93	28.3	34.4	23	70.2	Variable	.8	1	Ci., A.-Cu.	S.-Cu., Cu.	------	
14	59.66	28.7	34.2	25.5	66.3	NW quad.	1	.5	A.-Cu.	S.-Cu., Cu.	------	↙° p.
15	60.29	28.6	33.9	24.5	69.3	E quad.	1.2	2.5	A.-Cu.	Cu. WNW	------	⌐◪ p.
16	59.36	28.4	33.9	24.4	72.3	Variable	1.2	.5	Ci.	Cu.	------	
17	58.53	28.4	34.1	23.7	72.8	NW quad.	1	.5	A.-Cu.	Cu.	------	
18	57.30	27.6	34	23.2	74.2	NE quad.	.8	.2	Ci.	Cu. N	------	⊕ ↙° p.
19	57.19	27.6	33.1	22.6	75.5	N quad.	1.3	0	Ci.	Cu.	------	♎ ≡ a. ⊕ p.
20	57.15	28.9	33.9	25	69.2	Variable	1	.3	Ci.	Cu.	------	↙° p.
21	56.99	28.4	32.9	25.1	75	Variable	1	2.8	Ci.-S.	Cu. SSW	------	↙° ⊕ p.
22	56.87	29	34.5	24.3	67.9	Variable	1.2	1.2	A.-Cu.	Cu.	------	
23	57.19	28.6	34.7	25	72	E quad.	1.2	.8	Ci.-S.	Cu.	------	⌐◪ ⌒ d p.
24	57.02	28.9	34.2	24.9	74.5	Variable	.8	6.3	A.-Cu.	Cu.	1	⌐◪ d° ● ⊕ p.
25	57.69	26.4	32	23.4	86.6	E quad.	1	9.3	Ci.-S.	N.	78.7	d ⌐◪ a. ●² ⊕ p.
26	58.47	27.3	32.4	23.5	78.8	SE quad.	.8	7.2	Ci.-S.	Cu., S.-Cu.	------	⌒ a. ♎ p.
27	59.27	28.2	32.9	24.5	73.7	S quad.	1	2.5	Ci.-S.	Cu.	------	♎ p.
28	59.48	28.8	33.9	24.4	70.8	Variable	1	1.7	Ci.	Cu.	------	↙° p.
29	59.74	28.2	32.6	25.2	75.2	S, E	1	3	A.-Cu.	S.-Cu., Cu.	------	⌐◪ d° p.
30	59.53	28.3	32.8	24.3	71	Variable	1	.3	Ci.	Cu.	------	↙° p.
Mean	758.50	28.2	33.5	24.3	72.2		1.1	1.9			------	
Total											79.7	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	759.61	27.4	35.1	20.1	68	S	0.5	1.5	Ci.	Cu. SE	------	♎ a.
2	59.74	27.1	35.5	21	69.3	SE	.2	2.5	------	Cu.	------	♎ a.
3	59.89	26.7	34	20.7	74.2	S	.3	3.7	Ci.	Cu. S	------	♎² a.
4	59.12	27.7	35.4	21.5	67.5	SE	.5	3.7	Ci.	Cu.	------	♎² a.
5	59.52	27.3	35.1	20.6	68.8	SE	.7	5.3	Ci.	Cu. SE	------	♎² a.
6	60.11	28	36.2	22	71.2	SE	.2	6	------	Cu.-N. SE	------	♎ a.
7	59.98	27.9	35.5	22.2	70.3	Variable	.5	2.8	------	Fr.-Cu. SE	------	♎ ∞ a.
8	59.07	28	36	21.6	70	NE	.2	.8	------	Cu.	------	♎ a.
9	58.60	28.5	36.8	21.6	68.5	SE, S	.3	1.3	Ci.	Cu.	------	♎ a.
10	58.60	28.6	37.4	22.2	65.7	SE, NE	.8	2.2	Ci.	N.-cf.	------	♎ a. d p.
11	58.73	28.8	37	23.5	71.3	SE, NW	1	6	Ci.	Cu. S, SE	------	♎ a. ↙ p.
12	58.70	28.2	36.1	23.5	72.8	NE	1	6.3	Ci.-Cu. N	Cu.-N. NE	2.5	♎ a. ↙ p.
13	60.03	25.5	30	22.5	90.3	NE	.2	9.3	------	Cu.-N. NE	25.4	● a. p. ⌒² p.
14	60.15	27.8	35	23.2	82.2	NW	.2	7.2	------	Cu.-N. E	------	⌒ ⌐◪ ↙ p.
15	60.61	28.6	36	24.2	75.5	SE, NE	.3	5.3	Ci.	Cu.-N. S	------	♎ a. ⊤ p.
16	59.22	28.8	36.8	23	73	Variable	.5	3	Ci.	Fr.-Cu. S	------	♎ a. ↩² p.
17	57.93	29.1	36.5	24.2	75.5	NE	.5	3.8	Ci.	Cu. NW	------	♎ a.
18	56.61	29.6	37.4	24.5	73.8	NW	.7	6.5	Ci.	Cu. E, NNW	------	↙ p.
19	57.11	28.7	34.5	24.8	71.5	NE	1.3	7.8	Ci.	Cu.-N. NW	------	↙ p.
20	57.26	28.3	36.4	22.5	73.2	NW	.8	6.8	Ci.	Cu. S, N	77.7	♎² ↙ a. ●² ⌐◪² p.
21	57.18	27.2	33.3	22.6	83.5	NE	.2	8.2	Ci.-S.	Cu.-N. NE	2	● ↙ a. ● ⌐◪ p.
22	57.57	26.8	31.5	23.1	80.2	NW	.2	6.8	Ci.	Cu.-N. N	2	d a. p.
23	58.24	27.2	33	23.4	80.5	SW	.2	8.5	Ci.-S.	Cu.-N. S	3.3	● a. ↙ ⌐◪ d p.
24	58.88	26.4	31.5	23.5	84	SE	1	9	Ci., Ci.-S.	Cu.-N. SE	3.8	● a. ⌒² d p.
25	59.31	24.5	27.2	22.5	90.2	SE	.5	10	Ci.-S.	N. SE	14.7	● a.p.
26	59.41	26.3	33	22	83.3	SW, SE	1.2	7.8	Ci.-S. SE	Cu. SE, S	9.9	≡ a. ○ ● ⌐◪ ↙ p.
27	59.90	25.8	35.3	22	85.7	S, SE	.3	7.3	Ci.	Cu.-N. S	75.9	⊕ ♎ ≡ a. ⌒ ●² ⌐◪ p.
28	59.87	27.4	35.2	22	82.2	SE	.5	4.7	Ci.	Cu. SE	------	♎ a. ↙ p.
29	59.90	28.7	35.4	23.7	75.3	SE, SW	.3	1.8	Ci.-S. N	Cu. S	------	♎² a.
30	59.89	28.2	35.5	22.3	76.8	SW	.3	.7	------	Cu.	------	♎ a.
Mean	759.02	27.6	34.8	22.6	75.8		.5	5.2			------	
Total											217.2	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.87	26.4	31.9	21.5	73.3	SE	12.8	0.2	Ci.		------	Ω a. ∞ a. p.
2	60.03	26.2	31.3	21.1	74	SE quad.	10	.5	A.-Cu. S	S.-Cu., Cu.-N.	------	Ω a. ∞ a. p.
3	60.07	26.3	31	22.1	75.5	SE, NE	10.2	1.8	------	S.-Cu. S	------	Ω a. ⊤° ☾ p.
4	59.48	26.4	31.8	21.6	75.3	E quad.	10.7	1.7	A.-Cu. S	Cu.-N. SSE	------	Ω a.
5	59.96	26.4	30.6	22.6	77	E quad.	12.8	1.8	------	Cu.-N. SE	------	Ω a.
6	60.50	26.5	30.9	22.7	79.7	NE quad.	12.7	.8	------	S.-Cu., Cu.-N.	------	☾° Ω a. ☾ p.
7	60.14	26.8	32.3	22.1	74.1	E, NE	12	.3	------	Cu.-N.	------	Ω a. ∞ a. p.
8	59.26	26.8	31.6	20.6	75	SE, SW	11.6	0	------	------	------	Ω a. ∞ a. p.
9	58.73	26.6	31.7	21.6	78.2	E quad.	9.3	1.2	A.-Cu. W	S.-Cu.	------	Ω a. ∞ a. p.
10	58.95	27.4	33.1	23.3	74.7	S, N	12.2	1.7	------	S.-Cu. SW	------	∞ a. **p.** ☂° p.
11	59.39	27.4	31.3	24.8	77	N quad.	9.7	1.3	A.-Cu. SW, NW	S.-Cu.	------	∞ a. p. ☾ p.
12	59.60	26.6	30.7	24.1	78	NE	18.6	6.7	A.-Cu. NW	Cu.-N. NE	2.5	● p.
13	60.62	24.9	26.1	23.1	87.2	NE	13.9	8	A.-Cu. SW	S.-Cu. E	35.3	● a. p. ◠ p.
14	60.68	26	30.2	21.6	82.3	SW, NE	8.2	3.2	------	S.-Cu. S, E	------	☾ p.
15	60.90	26.9	31.1	23.8	82.5	Variable	9.7	1.8	A.-Cu. SW	Cu.-N. S	------	∞ a. p. ⊤° p.
16	59.46	27	32.3	21.6	80.2	Variable	8.8	.8	------	S.-Cu. W	------	∞ a. p. ⊤° p.
17	58.46	27.3	31.2	24.3	80.5	NW, N	7.5	5.2	------	S.-Cu. N	------	∞ a. p.
18	57.23	27.8	31.5	24.2	78.2	N, NE	9.9	3.3	------	S.-Cu.	------	∞ a. p. ☾ p.
19	57.95	27.2	31	25.3	75	NE, N	13.6	2.8	Ci.	Cu.-N. NW	------	∞ a. p.
20	57.92	26.6	30.5	24.1	75.9	NE quad.	13.6	6	------	Cu.-N. NE, S	------	∞ a. p. ⊓⊿° p.
21	57.45	26.6	31.1	23.6	80.5	NE	13.2	8.3	A.-Cu. W	S.-Cu. S, SW	------	⊓⊿° p.
22	58.04	26	28.1	23.9	82.3	E quad.	11.1	9.5	A.-Cu.	S.-Cu. SE	2.3	☂° a. ● a. p.
23	58.48	26.4	30.8	23	81.5	E quad.	12.1	4.2	A.-Cu. S	Cu.-N.	------	∞ a. p.
24	58.79	26.5	31.4	23.1	79.5	SE	12.8	6.5	A.-Cu. W	S.-Cu., Cu.-N. SE	.5	● p.
25	59.34	24.6	29	23	87.3	SE, S	11.5	10	------	S.-Cu. SE	4.3	● a. p.
26	59.47	25.8	32.3	22.2	85.3	Variable	12.3	7.5	A.-Cu. S	Cu.-N. S, SW	6.3	⊓⊿° ☾ ● p.
27	59.78	25.6	32.8	22.6	87.3	S, SW	13.4	3.8	Ci. S	Cu.-N.	8.1	⊓⊿ ● ◠ p.
28	59.96	26.5	32.5	22	83.5	S, NE	14.2	.7	------	S.-Cu. SW	------	⊓⊿ ☾ p.
29	60.06	27.5	32	23.1	78.3	NE, SE	10.9	.2	------	Cu.-N.	------	∞ a. p. ☾ p.
30	59.88	27.8	32.7	23.1	72.9	E quad.	11.4	.3	------	S.-Cu., Cu.-N.	------	∞ a. p. ☾ p.
Mean	759.35	26.6	31.2	22.9	79.1	------	11.7	3.3	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	59.3	

METEOROLOGICAL DATA, FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	21.9	97	78	10	10	12.2	♌ a. d ● p.
2	31.3	21.5	96	84	8	9	------	♌ a. p° p.
3	31.5	21.3	97	78	8	9	------	♌ a. p° p.
4	31.8	23.3	90	75	6	8	------	♌ a.
5	31.3	23.1	94	90	10	10	40.4	♌ a. ● p.
6	30.1	21.4	97	82	10	10	------	♌ a.
7	32.6	21.2	86	70	5	8	------	♌ a.
8	31.6	21.5	94	86	5	7	------	♌ a. ≶ p.
9	31.4	22.3	95	84	5	3	------	♌ a. ≶ p.
10	31.9	22.2	96	83	5	3	------	♌ a.
11	31.7	21.7	96	82	3	5	------	♌ a.
12	32.3	21.9	95	91	3	5	------	♌ p° a.
13	32.3	21.6	97	68	5	5	------	♌ a.
14	32.3	21.8	95	76	5	5	------	♌ a.
15	32.5	21.5	96	75	5	5	------	♌ a.
16	32.4	22.6	96	69	7	10	------	d p° ⌒ ⌣ ≶ p.
17	32.6	22.8	95	67	8	10	?	♌ a. ● p.
18	32.2	23.5	92	78	10	10	6.4	♌ d a. ● ⌣ p.
19	32.1	23.5	94	80	10	10	------	♌ a. ⌣ p.
20	32.2	22.5	90	74	10	10	------	♌ a. ⌣ p.
21	32.3	23.9	90	74	10	10	------	♌ a.
22	31	23.7	92	75	8	8	22.1	♌ ● a.
23	32.6	22.4	91	70	7	10	------	♌ a.
24	32	23.1	91	74	10	7	------	♌ a.
25	32.2	22.2	95	75	10	10	10.2	♌ ●° a. ● p.
26	32.5	21.4	97	76	7	10	35.6	♌ a. ●² p.
27	32.6	21.3	96	74	10	8	------	♌ a. d° p.
28	32.6	22	95	83	5	7	------	♌ a.
29	31.3	22	88	68	8	10	2.8	♌ ┬ a. ● ≶ p.
30	32.1	21.7	92	72	7	10	------	♌ a. ≶ p.
Mean	32	22.2	93.8	77	7.3	8.1	------	
Total	------	------	------	------	------	------	129.7?	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	22	96	63	4	5	.8	♌ a. ┬ p.
2	31.8	22.8	96	74	10	10	------	●° a. ┬ p.
3	30.3	22	96	81	10	7	------	♌ a. ≶ p.
4	31.1	23	96	71	10	8	16.5	♌ a. ● p.
5	30.9	22	96	78	10	10	3.6	●° a. d ≶ p.
6	30.3	23	96	79	10	6	------	♌ a. ⌐◹ p.
7	30.7	22	92	86	9	10	------	♌ a.
8	30.3	22.7	96	78	2	9	2.3	♌ a. ┬ p² p.
9	30.5	20.5	95	75	0	10	------	♌ ┬ a. d p.
10	29.3	21.5	98	85	0	10	1	♌ a. p p.
11	32.3	22.2	97	76	3	10	------	♌ a.
12	31.3	22.4	96	82	10	10	.5	♌ a. p° p.
13	31.8	22	98	80	4	9	------	♌ a.
14	28.3	22.2	96	88	10	10	6.3	♌ ●° a. d p.
15	32.8?	22	96	94	3	10	25.9	♌ ●² a. d ┬ p.
16	28.3	23	96	96	9	10	28.7	♌ ●² ┬ a. d p.
17	30.3	22.3	96	83	9	5	1	♌ a. ●° p.
18	30.3	24.2	96	85	10	10	------	♌ a. ⌣ ≶ p.
19	30.3	23.5	98	78	9	10	------	♌ a. ⌣ p.
20	29.8	23	96	76	10	10	------	♌ a.
21	30.8	23	96	81	10	10	14	♌ a. ⌒ p.
22	29.3	22.2	96	81	10	10	2.5	⌐◹ ● a.
23	30.8	22.2	96	83	1	5	------	♌ a.
24	32.3	22	96	75	0	6	.8	♌ a. ●° p.
25	32	22	96	70	0	8	.8	♌ ●° a.
26	31.3	22.2	94	75	3	4	------	♌ a.
27	30.5	23	96	88	0	9	1	♌ p a.
28	31.9	22.2	98	80	10	9	------	♌ a.
29	32.3	22	96	77	4	9	------	♌ ┬ a.
30	31.3	22.4	96	85	4	10	------	♌ a. ┬ p.
Mean	30.9	22.4	96.1	80.1	6.1	8.6	------	
Total	------	------	------	------	------	------	105.7	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.4	23.1	90	69	6	5	1.5	●° ⌐◹ p.
2	30.4	23.6	96	70	10	4	------	
3	31.6	23.3	89	67	3	4	------	♌° a. ⌐◹ p.
4	29.5	23.4	91	74	9	8	29.2	d a. ● ⌐◹ p.
5	30	21.5	96	77	10	10	------	d a.
6	30	23.5	86	76	6	8	------	d a. ⌐◹ p.
7	29.6	23.6	90	79	9	9	------	┬ p.
8	29	23.6	85	73	3	9	5.6	● p.
9	29.1	22.5	95	75	3	3	------	≡° ♌° a.
10	29.4	23	89	72	3	8	------	
11	29.6	22.4	89	75	3	9	------	
12	31.6	23.4	85	72	10	8	------	
13	30.6	22.5	87	77	4	6	------	
14	27.8	23.4	86	88	10	10	------	d a.
15	30	23.4	83	80	8	8	------	┬ p.
16	30	24	92	82	8	8	2	p a.
17	29.6	23	95	75	4	5	------	d p.
18	30.1	22.9	85	74	9	10	------	⌣ p.
19	32	23	90	58	7	10	------	
20	31.9	23	88	71	9	10	------	
21	32	22.5	84	60	7	9	------	
22	30	24	86	77	10	10	------	d p.
23	29.3	24	84	75	8	8	------	
24	30.9	23	90	74	8	9	------	
25	31.3	23.8	88	70	9	3	------	d a.
26	31	23.6	85	74	3	4	------	
27	30.7	23	79	75	2	5	------	
28	31.8	23.5	86	69	9	8	------	d a.
29	31	23.4	88	65	8	8	------	┬ a. ≶ p.
30	31.5	23	89	67	3	9	------	┬ p.
Mean	30.4	23.2	88	73	6.7	7.5	------	
Total	------	------	------	------	------	------	38.3	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.7	21.4	99	84	8	8	5.6	┬ p.
2	31.7	22	96	69	9	8	19.3	● a. p.
3	31.2	22.9	98	85	8	8	------	d° a.
4	28.7	23.2	98	81	10	9	47.8	●² a. p.
5	31.8	22.5	98	88	7	6	6.6	● p.
6	33.2	20.9	97	60	5	7	29.2	● p.
7	31.8	22.3	99	62	6	7	------	● a.
8	31.7	20.8	99	72	6	5	------	
9	33.8	21.1	98	58	5	6	------	
10	33.7	21	95	62	7	6	------	⌒ p.
11	33.8	21.2	94	56	5	7	------	
12	33.4	22.2	95	58	5	7	------	
13	29.2	23	91	87	7	9	3.8	● p.
14	32.4	22.2	96	69	7	7	------	┬ p.
15	31.5	23.2	96	76	6	8	------	
16	33.9	22.9	95	66	5	7	------	
17	33.7	23	92	66	5	6	------	d p.
18	28.2	23.2	97	86	7	8	42.6	●² a. ● p.
19	32.3	20.6	96	66	5	8	------	⊖ p.
20	29.3	23	94	80	5	9	75.7	●² ⊖ p.
21	27.7	21	97	97	10	10	76.2	●² a. p.
22	31	20.4	98	72	6	7	------	
23	31.3	21.3	97	67	6	7	------	
24	30.9	23.5	93	76	9	7	------	
25	32.4	22.4	97	66	6	6	------	
26	32.9	22.6	96	64	5	5	------	
27	33	22	90	60	6	5	------	
28	33.2	22.3	96	60	5	5	------	⌐◹² p.
29	32	21.9	97	60	5	6	------	⌐◹² p.
30	32.3	21.3	99	61	5	5	------	
Mean	31.7	22	96.1	70.5	6.4	7	------	
Total	------	------	------	------	------	------	306.8	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	------	97	62	8	10	1	≡ a. ● ≲ p.
2	32.2	------	90	62	10	8	------	○ ≲ p.
3	32.5	------	91	63	8	10	2.5	●° p.
4	32.1	------	91	65	8	2	25.4	⌐◪ ●² p.
5	32.4	------	92	58	5	9	12.7	♌ a. ● p.
6	32.5	------	94	60	3	4	11.4	≡° ♌ a. ⌐◪ ●² p.
7	31.1	------	93	70	6	10	------	♌ a. ≲ p.
8	32.1?	------	95	57	8	7	------	≡° ♌ a. d ≲ p.
9	32.3	------	88	58	2	2	------	♌ a. ≲ p.
10	32.4	------	93	64	4	8	------	♌ a. d p.
11	35	------	92	49	5	6	------	♌ a. d ≲ p.
12	34.8?	------	93	62	7	5	------	≲ p.
13	33.4	------	92	59	4	7	------	♌ a. d p.
14	34	------	92	58	10	4	1	┬ ≲ ● p.
15	33.1	------	93	59	10	10	------	○° a. ⌣ p.
16	34.1	------	93	66	6	4	10.2	♌ a. ● p.
17	32.1	------	93	65	8	4	------	≲ p.
18	32.1	------	91	57	6	8	2.5	♌ a. ● p.
19	31.2	------	92	69	10	8	------	≲ p.
20	30.8	------	93	68	3	8	15.2	♌ a. ⌐◪ ● p.
21	26	------	88	87	10	10	10.2	d a. ● a. p.
22	30	------	91	64	8	8	------	♌ a. ⌣° p.
23	31	------	90	65	2	3	------	♌ a.
24	32.1	------	93	60	4	7	------	♌ a. ≲ p.
25	33.3?	------	93	54	2	5	15.2	♌ a. ● ⌐◪² p.
26	34.1	------	85	55	2	2	------	♌ a. ≲ p.
27	32.6	------	90	67	2	4	38.1	♌ a. ⌐◪ ●² p.
28	33.4	------	88	54	1	5	------	♌ a. d ≲ p.
29	32.6	------	92	64	4	10	3.8	♌ a. ● ⌐◪ p.
30	32.8	------	93	57	4	3	------	♌ a. ┬ ≲ d p.
Mean	32.4	------	91.7	61.9	5.7	6.4	------	
Total	------	------	------	------	------	------	149.2	

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.4	21.4	85	60	4	8	------	♌° a.
2	33.8	23.7	91	62	8	8	------	
3	29.9	23.5	92	75	9	9	5.1	d ● p.
4	32.1	22.8	90	72	9	4	------	
5	32.7	22.5	89	65	3	7	------	♌° a. p° p.
6	32.4	20.5	93	67	4	5	5.1	♌ ≡° a. ● p.
7	31.2	22.4	88	65	10	9	------	
8	31	20.9	89	75	9	9	------	
9	33.7	20.2	86	54	2	2	------	
10	34.1	20.6	89	55	1	2	------	
11	34.5	20.9	89	56	2	1	------	♌° a.
12	34.7	21.2	91	59	2	2	------	♌ ≲° a.
13	34.9	22.1	89	67	1	9	------	
14	33	22.9	93	65	9	9	33	d° ● ≲ ┬° p.
15	33.2	23.5	93	58	9	8	------	● a.
16	32.7	22.9	92	63	0	3	------	♌ a.
17	32	23.4	92	66	2	5	------	♌° a.
18	32	23.4	93	68	9	9	.5	●° a.
19	33.2	21.7	88	66	3	9	------	♌ a.
20	31.4	23.2	90	62	4	8	------	♌° a.
21	27.3	21.9	92	88	4	10	34.3	♌ ●° a. ● p.
22	26.2	21.5	92	84	10	10	30.5	● d a. p.
23	30.9	21.1	93	70	10	10	------	d° ⌣ p.
24	32.6	22	93	65	4	7	------	⌣ p.
25	33	22.2	89	69	1	8	1.3	d p.
26	33.4	22	89	60	2	4	------	┬° ≲° ⌣° p.
27	33.5	21.5	90	60	1	4	------	
28	32.8	22.1	90	63	2	3	------	♌° a.
29	34.1	22	91	63	3	4	------	♌° a.
30	33.1	22.1	91	69	4	5	------	♌° a.
Mean	32.4	22.1	90.4	65.7	4.7	6.4	------	
Total	------	------	------	------	------	------	109.8	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	23.6	91	63	10	7	------	● a.
2	32.4	24.2	85	60	9	8	------	
3	31.5	24.5	85	67	8	10	------	○ p.
4	30.7	23.7	83	66	10	8	3.6	
5	30.5	23.5	89	74	9	4	------	● a.
6	31.5	24.1	85	72	7	6	------	♌ a. ≲ p.
7	------	24.3	97	69	8	5	------	♌ a. ≲ p.
8	32.3?	23.7	89	66	5	6	------	♌ a. ≲ p.
9	33.2	24.2	88	61	7	5	------	♌ a. ┬ p.
10	34	24.4	91	68	6	7	------	♌ a.
11	32.8	25.4	87	67	10	9	2	d ≲ ┬ a.
12	32.5	24.5	90	66	4	7	54.4	● a.
13	31.9	24.3	88	62	10	9	4.3	● ⌐◪ a.
14	32.2	23.9	90	66	10	7	1.8	● a. p. ≲ p.
15	31.8	22.8	87	67	8	6	------	┬ p.
16	32.1	23.5	89	66	10	5	------	p a.
17	------	------	------	------	------	------	------	
18	------	22.1	------	65	------	10	------	⌣ p.
19	34.7?	22.5	88	67	6	8	------	♌ a. ○ ⌣ p.
20	34.4	23.8?	90	63	9	5	------	♌ a. ⌣ p.
21	28.9	23	90	82	10	10	72.9	● a. p. d p.
22	26.4	21.2	90	89	10	10	72.4	● a. p.
23	29.7	21.8	89	69	10	7	------	⌣ p.
24	32.3	22.4	89	69	8	10	1.8	♌ a. ● ┬ ⊕ ⌣ p.
25	32.9	23.2	92	65	5	5	------	┬ p.
26	34.6	23.2	95	64	7	5	------	
27	34.3	24.5	86	65	9	4	------	
28	32.4	24.2	94	68	10	6	------	≲ p.
29	33.8	22.4?	83	68	8	4	------	●° ┬° a. ≲ p.
30	32.7	24.8	80	68	8	6	------	≲ p.
Mean	32.2	23.6	88.6	67.7	8.2	6.9	------	
Total	------	------	------	------	------	------	213.2[1]	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.7	22.5	96	86	6	10	25.4	♌ a. ● ┬ p.
2	28.8	23	93	70	9	8	2.8	♌ a. ┬ ● p.
3	27.2	23	98	86	9	9	26.4	≡ a. ● a. p.
4	30	23.4	94	82	10	9	5.1	d a. ●° ┬ p.
5	29.6	21.9	94	78	8	7	4.8	● a. ┬ p.
6	29.8	22	96	86	6	7	2.5	♌² a. ┬ ● ≲ p.
7	30.8	22.9	100	61	10	8	------	♌² ≡² a.
8	28.5	21.6	94	74	8	9	2.8	♌ ●° a. ⌐◪ ● p.
9	29.8	21.5	96	64	7	3	------	♌ ≡ a. ┬ p.
10	30.6	21.8	96	81	6	6	3.8	♌ p° a. ● p.
11	29.8	21.8	98	65	7	6	------	♌ ≡ a.
12	30.3	23	96	60	6	7	------	♌ a.
13	28.2	23.5	95	78	9	10	4	♌ a. ●°a. p. ⌒ p.
14	30.3	22	94	67	10	9	20.6	♌ a. ● p.
15	27.2	22.4	87	82	10	10	.3	♌ a. d⌣ p.
16	30.4	21.4	95	80	9	10	2.8	♌ a. ● d p.
17	28.9	21.4	100	70	8	8	1.3	♌²≡²●°a. ●° ⊥ p.
18	28.6	22.5	93	83	9	10	1.5	♌ a. d ● p.
19	30	22.2	97	65	7	8	1.3	♌² a. ⌐◪ ● ⌒ p.
20	29.1	22.2	96	76	6	9	1.3	♌ a. ⊕ ⌣ p.
21	25.6	23.1	95	90	10	10	31.5	⌐◪² a. ● a. p.
22	28.1	23.1	96	71	10	10	4.6	●° a. p.
23	29.3	23	99	75	10	8	2.3	≡² a. ⌐◪ p.
24	32.1	23.3	96	64	8	7	------	♌ a. ⌐◪ d° p.
25	32.8	23.2	94	68	2	8	3.8	♌ a. ┬ ● p.
26	31.5	23	95	84	6	7	20.6	♌ a. ⌐◪ ● p.
27	31.1	23.3	98	68	6	7	------	♌ ≡ a. d° p.
28	32.5	23.5	93	84	6	8	9.7	♌ a. ⌐◪ ● p.
29	31.6	22.6	95	84	3	8	4.3	♌ ● a. ⌐◪ d° p.
30	30	22.6	96	65	7	8	1.3	♌ ● a. d° p.
Mean	29.7	22.6	95.5	74.9	7.6	8.1	------	
Total	------	------	------	------	------	------	184.8	

[1] 29 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

DUMAGUETE.

[$\phi = 9°\ 18'$ N; $\lambda = 123°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	------	------	------	
2	------	------	------	------	------	------	------	
3	------	------	------	------	------	------	------	
4	------	------	------	------	------	------	------	
5	------	------	------	------	------	------	------	
6	------	------	------	------	------	------	------	
7	------	------	------	------	------	------	------	
8	------	------	------	------	------	------	------	
9	------	------	------	------	------	------	------	
10	------	------	------	------	------	------	------	
11	------	------	------	------	------	------	------	
12	------	------	------	------	------	------	------	
13	------	------	------	------	------	------	------	
14	------	------	------	------	------	------	------	
15	------	------	------	------	------	------	------	
16	------	23.7	------	75	------	2	------	
17	------	23.8	82	68	1	2	------	☌ a.
18	------	23.4	85	76	3	10	------	☾ p.
19	------	23.2	84	81	10	10	------	☊ a. ☋° p.
20	------	24.4	85	65	10	10	------	d a.
21	------	24.1	89	67	8	10	21.1	d p.
22	------	22.2	94	74	10	10	13.0	● a. d p.
23	------	23.3	96	75	10	10	.8	d a. ● ☾ p.
24	------	23.9	90	69	10	10	1.8?	☊ d a. ● ☋² p.
25	------	24.2	92	78	5	4	------	☊ a.
26	------	25	88	71	10	2	------	
27	------	25.2	82	67	4	3	------	☾ p.
28	------	26.4	85	81	4	10	------	☌ a.
29	------	26	86	75	9	6	------	☌ a.
30	------	25.2	89	75	9	7	------	☾ a. ○ p.
Mean	------	24.3	87.6	73.1	7.4	7.1	------	
Total	------	------	------	------	------	------	------	

YAP (Western Carolines).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	24.1	88	91	9	9	13.7	● a. p.
2	30.5	24.6	95	76	9	9	7.1	d° a. ● p.
3	30.6	24.5	88	76	9	8	.8	● a. d° p.
4	30.3	25	88	72	8	8	7.1	d° a.
5	31	24.4	88	72	8	6	------	● a.
6	30.8	25	87	73	8	5	------	d° ○ a.
7	31.6	24.6	89	72	4	8	1	● p.
8	31.1	24.5	90	74	4	7	------	d° p
9	30.7	24.2	87	72	8	8	2.3	d° a. ●° p.
10	31.2	24.3	84	64	7	5	------	☾° a.
11	31.3	25.5	93	67	8	8	19.9	d p a. ● p.
12	30.2	25.2	92	76	6	6	3.8	●° a. ☾° p.
13	30.8	25.1	88	72	9	7	5.3	
14	29.5	24.6	97	76	8	6	4.1	●da.○² ☾° ●° p.
15	30	25	93	88	5	8	56.1	d a. ● a. p. ☿° p.
16	30.8	23.9	100	81	9	9	1.3	●² a. d p.
17	31.4	25.4	92	78	9	8	------	d a. p. ☿° ☾° p.
18	31.3	25.5	90	74	6	6	1	○° ☾° ☿ p.
19	30.9	24.8	96	76	7	9	4.6	●° ○° a ● ☾ ☿² ☾°
20	31.4	24.5	97	74	9	8	2	d a. ☽° ● ☾ ☿ p.
21	32.4	24.5	95	71	4	6	------	d° a. ☿ p.
22	32.5	24.8	92	67	3	2	------	☊° a. ☿² d° p.
23	31.8	25.3	92	92	3	8	34.8	☊° a. d° ● ☿ p.
24	32.1	24.7	95	72	2	6	------	☿ d° p.
25	31.8	25.1	90	73	8	5	2.5	● a. ☿² d° p.
26	31.1	26.2	83	77	2	4	1.6	d a. p.
27	30.5	25	91	79	9	5	9.7	d ● a. ● ☿° ☾° p.
28	30.5	25.3	88	77	4	8	2.8	d° a. p. ● ☾° p.
29	30.7	24.3	90	72	7	8	.8	● ○° a. ☿° d° p.
30	31	24.9	90	76	7	7	21.9	☊° a. d° ☐ ☾ ● p.
Mean	31	24.8	90.9	75.3	6.6	6.9	------	
Total	------	------	------	------	------	------	204.2	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	23.2	93	81	10	8	------	
2	31.5	23	93	77	8	10	21.8	● ☾ d p.
3	30	22.8	95	87	10	10	9.9	● a.
4	30	23.5	93	78	10	6	37.1	● a. ●² d ☾ p.
5	30.5	24	93	70	10	5	------	d ☰ p.
6	30.6	23.1	93	87	10	10	14.5	d ☰ a. p a. p.
7	30.4	23	90	76	10	7	4.6	●° ☾ p.
8	31	22.6	90	79	10	10	8.4	☽ p a. d ☰ a. p.
9	29.5	------	94	76	10	5	------	
10	29.5	23.1	93	69	10	4	------	☊² a.
11	31.8	22	91	57	7	3	------	☾ p.
12	32.2	22	89	65	10	5	------	
13	29.5	23.1	87	86	10	10	------	☾² p.
14	30.4	23.2	87	72	10	8	------	d° a.
15	30.5	23.5	95	80	10	10	------	d ☰ a. ☋ ☿² ☾ p.
16	30.5	23	90	72	10	3	------	☾ ☾ ☾ ☿² p.
17	31	21.9	88	74	7	8	------	☾ ☾ p.
18	------	------	------	------	------	------	------	
19	------	------	------	------	------	------	------	
20	------	------	------	------	------	------	------	
21	------	------	------	------	------	------	26.9?	● a. p.
22	------	------	------	------	------	------	49.3?	● a. p.
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	33.4	22.7	90	66	10	4	------	☊² a.
30	32	22.8	91	57	10	8	------	
Mean	30.7	22.9	91.3	74.2	9.6	7.1	------	
Total	------	------	------	------	------	------	------	

SAN JOSE BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.2	23.4	87	58	5	3	------	
2	33.9	22.2	84	60	3	6	------	
3	33.5	21.8	86	58	3	8	------	☊ a.
4	32.9	23.4	87	93	7	10	3.6	● ⊤ p.
5	32.7	23.6	91	63	10	10	------	☊ a. ☾° p.
6	34.3	21.8	92	62	10	8	------	
7	34.4	22.1	82	54	3	1	------	☊ a.
8	34	23	83	56	10	2	------	
9	34.3	22.7	83	55	10	6	------	
10	34	22.1	85	58	2	7	------	⊤ p.
11	34.3	22.5	88	54	1	3	------	
12	34.7	21	87	51	1	1	------	
13	34.1	21.5	81	54	2	10	------	☊ a.
14	33.1	24	83	60	3	3	18.8	☊ a. ● p.
15	34.9	23.9	93	56	9	10	------	☊ a. ☾ p.
16	34.1	22.6	88	59	1	10	------	☊ a.
17	33.8	22.6	82	61	0	3	------	
18	33.6	22.5	82	63	1	8	------	☿ p.
19	33.9	23.4	77	62	4	4	------	☋ p.
20	34	23	80	60	7	3	------	☋ p.
21	34.1	22.6	79	59	5	3	------	☾ ☾ p.
22	27.2	24.6	79	83	10	10	4.5	⊤ a. d a. p. ☾ p
23	29.9	23.4	92	77	10	10	26.2	● a. p.
24	26.2	23.3	94	86	10	10	10.4	● a.
25	32.3	22.4	91	74	8	3	------	☊ a.
26	32.6	22.8	91	68	0	3	------	☐ p.
27	33.4	23.3	90	72	1	5	2	☊ a. ⊤ ● p.
28	33.7	22.5	91	60	1	3	------	
29	34.1	23.4	83	61	7	4	4.8	● ⊤ ☾ p.
30	34.1	22.6	91	62	4	10	1	☊ a. ● p.
Mean	33.2	22.8	86.1	63.3	4.9	5.9	------	
Total	------	------	------	------	------	------	71.3	

METEOROLOGICAL DATA, ETC.—Continued.

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	24.2	93	77	6	8	------	☾ p.
2	30.5	23.9	93	77	5	8	26.7	☾ ● p.
3	25.6	24	96	95	10	10	70.6	●² a. p.
4	29.3	22.6	97	90	9	10	7.7	≡ a. ● a. p.
5	29.6	23.4	92	79	5	7	4.8	⊤ ● ☾ p.
6	29.5	23.8	96	80	9	9	1.3	● a. ☾ p.
7	30.4	23.2	96	75	10	6	15.5	● a. p. ◠ p.
8	29.5	23.2	96	91	8	10	13	≡ a. ● a. p.
9	29.2	23.5	96	83	10	8	15.7	● ⊤ a. ☾ p.
10	30.5	23.2	97	79	9	5	1.5	● a.
11	30.7	23.5	96	74	8	4	------	● ≡ a. ☾ p.
12	30.9	20.9	94	73	3	6	.8	≡ ♌ a. ●° p.
13	29.8	23.3	95	76	8	6	2.3	≡ a. ● p.
14	30.2	22.3	86	71	6	7	23.4	● a. ●° p.
15	30.6	22.9	96	70	10	8	------	≡ a.
16	30.7	23.8	86	75	5	5	------	
17	30.4	22.8	93	86	9	10	1.3	≡ ♌ ● a. ☋ p.
18	30.6	23	95	73	4	9	------	≡ ♌ a.
19	30.7	22.6	94	74	3	3	------	≡ ♌ a. ☾ p.
20	30.9	22.3	96	73	5	6	7.4	≡ ♌ ● a.
21	30.7	21.5	96	71	8	8	83.1	≡ ♌ ◯ a. ●² p.
22	26	23	96	89	10	10	132.4	●² a. p. ◯ p.
23	29.6	23.1	97	74	6	5	------	≡ ♌ a. ☾ ☋ p.
24	29.2	23.3	97	74	8	6	8.7	● ⊤ a. ☾ ● p.
25	30.8	21.9	96	69	5	4	6.9	≡ ♌ a. ☋ ☾ p.
26	30.9	23.2	97	74	9	5	2	● ◠ a. ●° p.
27	30.9	23.8	97	75	8	6	23.1	●° ≡ a. ☾ p.
28	30.7	22.7	98	67	10	6	11.7	●² a.
29	30.3	23	94	71	9	8	8.4	● a. p.
30	30.7	22.7	97	75	9	6	16.8	● a. p.
Mean	30	23	94.9	77	7.5	7	------	
Total	------	------	------	------	------	------	485.1	

MASBATE.

[ϕ=12° 22′ N; λ=123° 37′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	24.4	98	76	8	7	------	
2	31.8	24.4	97	70	8	6	------	
3	29.5	24.6	98	98	9	10	11.9	
4	29.5	23.4	100	86	9	9	3.8	
5	31.8	24.5	96	------	10	8	------	
6	31.6	24.4	98	------	9	8	5.1	
7	31.6	23.6	98	------	8	8	------	
8	32	24.5	97	77	8	7	1.8	
9	31.6	24.2	100	51	10	8	------	
10	32	24.6	98	72	8	6	------	
11	31.2	24.5	98	92	8	6	------	
12	31.6	23.6	98	68	6	4	------	
13	32.5	23.2	99	68	8	8	------	
14	31.4	24	99	74	8	7	------	
15	32.6	25.2	98	69	8	6	------	
16	31.8	25.2	93	------	6	4	------	
17	32	23.2	98	------	7	7	------	
18	32	22.6	98	------	9	6	------	
19	31.6	23.4	97	78	10	9	------	
20	31.8	24	99	------	10	8	------	
21	33	23.8	98	69	9	8	------	
22	28.6	25.2	91	86	9	9	10.7	
23	29.4	23.8	99	98	9	10	60.5	
24	27.6	23.5	97	92	10	10	16.8	
25	30.6	23.6	98	85	9	8	10.7	
26	32	24	96	82	8	6	------	
27	32.5	25.6	100	71	6	7	------	
28	32.6	24.6	99	80	7	8	------	
29	32.2	25.2	99	77	8	7	------	
30	32.6	24	100	------	8	8	------	
Mean	31.4	24.2	97.8	78.1	8.3	7.4	------	
Total	------	------	------	------	------	------	121.3	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	25.4	81	66	8	6	------	
2	31.3	24.6	86	63	7	0	------	
3	31.4	23.9	83	71	6	9	0.5	●° p.
4	30.1	24.1	88	75	10	10	4.1	●° a. d p° ☾ p.
5	30.5	25.2	81	71	9	9	------	☾ p.
6	31.7	25	83	71	9	7	.8	
7	31.6	23.9	86	64	7	7	1.8	● a. ☾° p.
8	32	24	84	60	5	0	------	☾ p.
9	31.2	25	81	66	7	7	1.5	● d a.
10	31.8	25.6	81	68	7	3	------	
11	31.9	24.4	84	62	6	2	------	◹ p.
12	31.8	25.4	83	62	3	5	------	
13	32	24.2	82	60	8	4	------	
14	32.3	24.6	82	56	6	5	------	p° a. ☾² p.
15	32.7	26.1	82	62	8	9	------	
16	32.3	26.1	81	59	4	3	------	
17	32.6	25.3	82	56	4	2	------	
18	33	20.1	93	60	4	2	------	☋ p.
19	32.5	23	93	68	10	10	------	☾° p.
20	33	23.2	93	49	10	6	18.8	
21	32	23.1	97	65	8	10	2.8	●² a. ☋ ☾ p.
22	30.4	24.6	86	74	8	10	47.2	p. a. ●² ◹ ☋ p.
23	29.7	22.3	99	68	10	8	38.4	●² a. ● ◹ p.
24	26	23.1	97	90	10	10	9.6	●° a. p. ☾ p.
25	31.4	22.8	95	77	10	8	------	☋ p.
26	32.5	23.6	91	70	6	6	------	⊤° p.
27	32.6	25.5	86	61	4	3	------	
28	32.2	24.4	83	67	4	3	------	⊤ ☾ p.
29	32.4	25.8	85	65	4	3	------	☾ p.
30	32	25.4	82	65	7	4	------	
Mean	31.6	24.3	86.3	65.7	7	5.7	------	
Total	------	------	------	------	------	------	125.5	

LAOANG.

[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	23.2	91	75	8	6	0.3	●° p.
2	29.7	------	97	74	7	6	2.5	● p.
3	25.9	22.2	91	98	8	10	100.6	● a. ●² p.
4	29.6	22.6	97	76	9	7	1.1	●° a.
5	30	24.4	88	74	7	8	5.1	● p.
6	29.6	22.7	94	77	9	7	7.9	●° a. ● p.
7	30	22.9	92	79	2	7	------	
8	29.9	22.9	89	72	4	4	2.8	●° p.
9	29.7	23.6	92	76	9	8	6.4	● p.
10	30.1	22.6	91	74	3	4	------	
11	29.9	22.4	96	64	5	3	------	
12	30	21.1	95	69	2	4	------	
13	29.9	22.7	95	77	7	6	2.3	●° p.
14	30.5	23	96	68	8	8	4	●° a.
15	31.1	23.4	91	73	9	8	------	●° a.
16	30.1	23.5	88	69	8	2	.8	●° a.
17	30.4	20.4	96	71	4	3	------	
18	30.5	21.4	95	65	2	3	------	
19	30.2	21.4	96	71	7	8	------	
20	31.1	22.4	91	73	8	8	------	
21	29.6	21.1	97	64	8	6	8.6	● p.
22	26	23.2	92	92	10	10	71.1	● a. p.
23	30.4	23.2	96	98	8	9	14.8	● a. p.
24	30.6	23.6	93	71	10	10	------	
25	32.2	23.6	92	66	2	2	------	
26	30.3	23.2	93	82	7	6	14.5	● a.
27	30.2	23.4	91	74	3	3	15	● a. p.
28	30.3	22.7	96	76	4	3	1.5	●° p.
29	30.3	22.5	97	64	5	8	7.6	● p.
30	30.1	21.7	96	74	6	7	5.6	
Mean	29.9	22.7	93.5	74.5	6.3	6.1	------	
Total	------	------	------	------	------	------	272.5	

METEOROLOGICAL DATA, ETC.—Continued.

GUBAT.

[$\phi = 12° 55'$ N; $\lambda = 124° 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	26	98	76	8	5	------	☾ a.
2	32	25.5	99	------	4	4	4.8	☾ a. ● p.
3	31	24	99	74	8	10	17.5	☾ a. ● a. p.
4	29	23.5	91	82	8	10	1.8	☾ a. p p.
5	31	24	86	------	9	7	------	
6	31.8	24.5	86	72	10	7	.5	☿² p.
7	30.4	24.4	84	75	5	4	------	
8	31.4	24.3	85	70	4	7	------	☾ p.
9	31.6	24	87	68	8	5	9.4	● p.
10	32.2	23.5	93	------	7	5	------	
11	32.8	23.6	87	71	5	6	------	
12	32.4	24.5	86	------	3	5	------	
13	31.7	24.4	87	75	7	4	.3	☾ ●° a.
14	30.8	24.7	84	82	5	7	.3	☾ ☿ p a.
15	33.5	25.5	89	74	7	9	.8	● a.
16	32.5	24.9	86	------	7	5	------	
17	32	23.5	89	73	2	3	------	
18	32.2	21	95	70	6	5	------	
19	32.5	21.4	97	------	9	8	------	♌ a.
20	33	22	------	64	7	5	------	
21	33.5	22	------	69	7	5	------	
22	31	24.5	80	84	7	10	8.9	☿ a. ● p.
23	32.2	23.7	93	------	10	9	32.5	● a. p.
24	30.6	24.5	98	76	10	7	1.3	☿ ☾ a. ☾ p.
25	32.2	24	97	------	7	4	------	
26	32.6	25	90	------	5	4	------	
27	33.3	25.8	99	------	7	4	.3	
28	32	24.2	98	------	6	5	------	●° a.
29	32.8	26	97	------	7	4	1.1	☾ a. ☾ a. p ● p.
30	32.6	23.2	94	70	6	5	4.3	● p.
Mean	31.9	24.1	91.2	73.6	6.7	5.9	------	
Total	------	------	------	------	------	------	86.8	

SUMAY, GUAM (Ladrones Islands).

[$\phi = 13° 24'$ N; $\lambda = 144° 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	25.4	82	70	8	8	1.3	
2	29.6	25.4	84	66	2	7	------	
3	29.6	25.8	81	64	3	5	3.8	
4	29	24.4	92	75	6	8	.8	
5	30	25.6	84	68	5	8	.5	
6	29	25.4	84	74	4	5	6.8	
7	30	25.4	84	68	8	6	------	
8	29.6	24.8	84	64	10	4	------	
9	30	24.8	76	62	10	10	2.5	
10	29.6	24	92	68	8	10	11.5	
11	29.4	24.8	84	68	6	8	------	
12	29.4	24.6	84	67	10	10	------	
13	30.2	24.8	84	64	8	10	------	
14	29	25.4	84	78	2	7	5.5	
15	29.6	24.4	88	62	9	6	4.6	
16	30	25.6	82	64	8	5	------	
17	30.6	21.8	78	61	2	3	------	
18	29.6	21.4	80	64	1	3	------	
19	30.4	23.8	81	71	1	9	8.9	
20	28.6	23.8	92	92	9	10	6.6	
21	29.6	23.8	89	75	4	9	------	
22	30	24.8	89	75	2	2	------	
23	29.6	23.6	85	71	6	8	2.5	
24	28.8	23.8	88	75	2	8	19	
25	29.2	23.4	84	70	6	6	------	
26	29.8	25.6	84	67	2	5	------	
27	29.8	24.8	84	64	3	5	------	
28	29.8	25	84	67	3	5	------	
29	28.4	25.8	84	70	3	10	1.5	
30	29.6	25.2	84	66	10	7	------	
Mean	29.6	24.6	84.5	69	5.4	6.9	------	
Total	------	------	------	------	------	------	75.8	

CALAPAN.

[$\phi = 13° 25'$ N; $\lambda = 121° 11'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	22.5	88	62	9	5	------	
2	30.6	24.5	90	70	9	3	------	
3	31.3	23.6	96	61	9	6	1.1	●° p.
4	30.7	23.8	96	80	10	10	4.1	☿° a.
5	30.6	26	83	68	10	10	8.1	● p.
6	31	23.1	95	74	10	10	5.6	☿° a. p.
7	31	25	90	64	10	2	------	☾ p.
8	31.1	25.8	84	64	6	2	------	
9	31.2	25.6	84	60	5	1	------	
10	30.6	24.4	92	68	10	3	11.2	☾ a.
11	32	23.4	98	60	10	4	------	●² ☾ a.
12	31.6	24	85	55	8	4	------	
13	31.6	23.2	85	57	8	4	------	
14	31.4	23.3	87	65	9	2	16	●² p.
15	31.9	23.6	93	69	7	8	------	♉ ☋ p.
16	31.6	23.5	91	63	8	8	5.1	☿° a.
17	30.5	23.1	97	61	10	3	2.8	● ☽² a. ☾ p.
18	32.4	22.5	92	66	4	2	------	♌ a. ♉ p.
19	32	23.3	90	71	10	10	0.6	♐ ♉ ☿° p.
20	32.6	24.5	95	62	10	8	------	♉° ☋° p.
21	32.5	23.5	90	64	10	8	------	☾ p.
22	33	24	95	59	10	9	------	☿ p.
23	32.8	24	94	66	9	7	5.1	♐ ● ☿° p.
24	27.6	23.5	97	93	10	10	60.2	☾ a. ●² p.
25	26.8	22.8	98	87	10	10	2.8	☾ a. p.
26	31.3	22	93	72	2	7	------	☿ p.
27	32	23.5	88	73	8	6	5.6	☿° a. ● ☿ p.
28	31.5	23.2	94	59	5	2	2.5	●° p.
29	31.5	23.1	87	65	4	3	16.5	●² ♐ p.
30	31.5	22.5	92	67	4	2	8.6	● ☿ p.
Mean	31.2	23.7	91.3	66.8	8.1	5.6	------	
Total	------	------	------	------	------	------	155.9	

VIRAC.

[$\phi = 13° 35'$ N; $\lambda = 124° 14'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	25.5	84	65	4	5	------	♌ p
2	30.9	22.5	96	74	9	4	6.6	☿° ☾ a. ● ♌ p.
3	31.5	22.4	90	83	10	10	12.4	● a. p. ☿ p.
4	32.2	23.6	85	74	9	9	1.3	●° a. p. ♌ ☾ p.
5	31	24.6	85	67	6	8	2.5	♌ ☿ p.
6	31.1	23	96	66	8	9	.5	● ☾° a. ☿° p.
7	32.5	22.4	96	69	2	8	3.6	☿ a. ●°a. p. ♌ p.
8	31.5	23	95	68	4	2	------	
9	31.7	22	96	60	2	3	1	♌ ☿ p.
10	30.8	23.5	96	72	9	3	------	●° a.
11	31.4	22.1	97	68	4	3	------	☾° a. p. ♌ ☾ p.
12	31.3	21.7	97	65	6	4	------	
13	31.7	21.7	93	63	6	4	------	
14	31.9	22	95	73	8	6	------	☿° ☾ a. ♉ ☋° ☾ p.
15	32.3	23.5	88	64	9	7	------	☿° a. ♌ ♐° p.
16	31.9	24.9	83	72	7	7	.3	●° ♌° p.
17	31	20.5	97	69	1	2	------	♌ a.
18	30.9	20.8	93	73	1	8	------	
19	31.2	20	88	71	10	9	------	♌ a. ♉ ☋° p.
20	30.8	20.7	95	74	9	8	------	☿° ♉ p.
21	31.9	22	96	71	8	9	------	♉ p.
22	34.4	23.9	92	77	9	10	34.2	●° a. ● p.
23	32	23.5	90	77	10	9	19	☿ a. p. ♐ ● p.
24	30.7	22.5	92	83	10	9	10.7	● a. p. ☾ ♐ p.
25	30.5	25.4	85	79	8	5	.3	♉° p.
26	31	24.6	91	92	7	10	3.8	● ☾ a. p ☾² p.
27	31	23.9	86	76	5	3	------	♌ ♉ p.
28	30.5	22.4	97	73	8	4	1	♌°a. ●°a.p. ☾ ☾ p.
29	31.2	23.9	92	65	2	4	33	● ☾ a. p. ♐ ☾ p.
30	31.3	21.8	98	71	2	4	1.5	♌ ☾ ●° p.
Mean	31.5	22.8	92.1	71.8	6.4	6.2	------	
Total	------	------	------	------	------	------	131.7	

METEOROLOGICAL DATA, ETC.—Continued.

NUEVA CACERES.

[ϕ=18° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.9	20	96	63	3	8	0.5	● p.
2	32.5	20	98	64	8	8	------	≡° a.
3	30	20.3	99	89	8	8	5.1	≡° a. ● p.
4	32.1	22	97	69	9	8	------	
5	32	20.2	96	70	7	8	------	
6	32.2	20.9	98	66	9	9	------	
7	32.4	21.7	95	63	4	8	------	
8	31.1	20.5	95	71	8	6	------	
9	32.9	20.5	99	78	10	8	3.8	≡° a. ●° p.
10	33	21	96	68	7	7	------	
11	33.3	20	98	61	5	6	------	
12	33.2	20.3	97	59	8	6	------	
13	33.1	19.5	99	70	8	8	------	≡° a.
14	33	19	96	71	3	8	------	
15	33.5	21.5	98	90	6	10	16.8	● ⊤° p.
16	33.3	20.1	97	69	6	7	.8	p° p.
17	33.7	19.5	98	60	3	5	------	
18	33.3	19	96	57	3	6	------	
19	32.5	20.9	98	62	8	9	------	
20	33.2	19.6	99	64	9	10	------	≡° a.
21	33.7	20.1	98	71	10	9	------	d p.
22	32.4	21.3	97	86	9	10	4.9	d ● p.
23	32.4	23	95	86	10	10	8.6	●° a. p. d p.
24	28	22.5	99	87	10	10	28.5	d a. p. ● p.
25	33.6	22	98	83	10	10	51.9	● ⊤° p.
26	32.5	20.8	98	76	5	9	4.8	≡° ● a.
27	33.5	21.6	98	65	6	5	------	
28	33.5	20.4	96	57	4	8	------	d p.
29	32.3	21.3	96	89	3	8	3.2	p p.
30	33.4	20.5	97	73	5	8	------	
Mean	32.6	20.7	97.2	71.2	6.8	8	------	
Total	------	------	------	------	------	------	128.9	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35.8	23.1	91	45	1	6	------	
2	35.3	21	91	45	3	5	------	
3	36.2	21.2	91	53	4	7	------	
4	35.4	22.8	88	56	5	7	------	
5	35.2	22.5	87	46	7	6	------	
6	35	22	95	48	6	7	------	
7	35.4	22.5	88	44	5	5	------	
8	35.1	21.2	88	46	1	4	------	
9	36.6	21.3	88	49	2	4	------	
10	36.2	22.5	84	42	5	5	------	
11	35.8	22.3	87	54	2	7	------	
12	34.6	21.2	93	52	4	6	------	
13	36.3	21.1	91	42	4	7	------	
14	36.8	21	84	47	1	4	------	
15	36.6	23.4	95	45	4	5	------	
16	37.1	23.9	92	47	4	5	------	
17	36.2	22.6	87	42	3	3	------	
18	34.8	22.1	88	50	2	6	------	
19	34.4	24.1	87	61	7	6	------	⊤ a. p.
20	36	22.2	90	49	5	7	------	
21	36.1	23.6	89	55	5	7	0.5	⊤ ● p.
22	35.8	21.9	91	56	6	7	------	⊤ p.
23	33.8	21.7	91	90	5	8	20.6	● ⊤ p.
24	27.6	22.1	96	90	10	10	24.6	● a. p.
25	27.7	21.6	94	86	10	10	3.3	● a. p.
26	33	21.8	97	56	4	5	------	
27	33.3	23.1	92	60	7	6	------	
28	34.7	22.4	95	50	2	3	------	
29	35.4	22.5	90	45	3	2	------	
30	34.8	22.6	95	51	4	4	------	
Mean	34.9	22.2	90.5	53.4	4.4	5.8	------	
Total	------	------	------	------	------	------	49	

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	21.7	98	61	2	5	------	Ω ≡ a.
2	31.2	21.7	98	62	7	8	------	
3	31.6	22	96	61	3	9	------	d° p.
4	30.8	21.4	97	62	8	6	------	d° a.
5	31.5	22.2	98	61	2	3	------	≡ a.
6	31.5	22	97	61	7	2	------	≡ a.
7	31.6	21.9	96	59	2	4	------	≡° a.
8	31.2	22	97	60	7	9	------	≺ p.
9	32	22.2	97	60	6	6	------	Ω ≡ a.
10	32.1	22.2	98	60	3	8	------	
11	31.6	22	97	60	7	5	------	≡ a.
12	31.1	22.2	97	60	8	9	------	Ω ≡ a.
13	31.1	22.2	98	60	3	6	------	≡ a.
14	31.6	22.3	97	60	8	7	------	d° a.
15	31.5	22	97	60	7	9	------	
16	31.2	21.8	98	60	7	6	------	≡ a.
17	31.5	21.8	96	60	5	8	------	Ω ≡ a. ≺ p.
18	31.2	22	97	59	4	7	------	⊤° p.
19	31.3	22.1	97	60	7	8	------	d° ⊤° p.
20	31.8	22.3	97	60	5	6	------	⊤² p.
21	31.6	22.3	97	61	8	9	34.0	●² ⊤² p.
22	31.3	22.1	97	61	2	5	------	≡ a. ⊤° p.
23	31.8	22.4	98	60	7	8	39.9	●² ⊤° p.
24	29	19.7	97	64	10	10	73.4	● a. p.
25	28.5	19.4	98	65	8	9	16.8	p a. ● p.
26	30.1	20.1	97	60	5	8	------	⊤° p.
27	28.8	20	97	64	9	10	21.6	Ω ≡ a. ● ⊤° p.
28	31.4	21.5	98	60	8	8	------	⊤° p.
29	31.7	22.1	97	60	7	9	------	≡ a. ⊤° .
30	31.7	22.2	97	60	3	6	------	
Mean	31.2	21.7	97.2	60.7	5.8	7.1	------	
Total	------	------	------	------	------	------	185.7	

STA. CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	------	------	------	
2	------	------	------	------	------	------	------	
3	------	------	------	------	------	------	------	
4	------	------	------	------	------	------	------	
5	------	------	------	------	------	------	------	
6	32.6	22.6	95	62	9	8	25.4	●° a. p° p.
7	32.2	22.4	96	68	7	6	.8	● ◠ a.
8	32.7	21.9	92	56	2	3	------	Ω² a.
9	33	21.6	94	53	4	2	------	Ω² a.
10	33.5	21.6	94	52	2	3	------	Ω² a. ⊤ p.
11	33.7	22	96	48	3	2	.1	Ω° ≡° ●° a. ≺ p.
12	32.7	21.4	96	53	7	6	------	Ω² ≡ d° a.
13	33.5	20.9	88	44	7	3	.3	Ω° ● ° d° a.
14	33.8	20.1	91	54	1	3	------	Ω² a. ≺ p.
15	34.3	22.3	88	50	8	7	------	Ω° a. d° a. p. ⊏⊿
16	34.7	22.2	95	45	6	4	------	Ω² ≡° a.
17	35.4	21.2	92	42	1	2	------	Ω² a.
18	36.5	20.9	90	48	2	3	------	Ω u. ∞² ≺² p.
19	35.7	22.9	94	53	9	9	7.6	Ω°a. ∞² ⊏⊿ ● p.
20	34.6	23	95	54	9	8	------	≡ a. ⊏⊿ ≺ p.
21	34.9	23	97	90	9	10	23.1	◯° a. p. ● ⊏⊿ p.
22	33.6	22.7	92	52	9	9	------	◯° a. p.
23	32.8	22.1	96	63	9	9	50.5	Ω ≡° d° a. ● p.
24	26.2	22	97	95	10	10	77.7	≡ a. ● a. p.
25	29.2	22.2	99	88	10	10	3.4	● a. d p ⊏⊿ p.
26	34.1	21.6	97	64	6	8	------	Ω² ≡ a. ⊏⊿ p.
27	32.6	23.5	92	75	8	7	5.3	Ω a. p ⊏⊿ p.
28	32.9	22.9	95	55	3	2	.3	Ω ≡° a. ≺ p.
29	32.9	23.4	90	60	8	4	4.3	d ◠² ● a. ≺ p.
30	33.4	21.5	96	57	2	3	.1	Ω² ≡° a. ≺² p.
Mean	33.3	22.1	93.9	59.2	6	5.6	------	
Total	------	------	------	------	------	------	------	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ANTONIO.

[ϕ=14° 22′ N; λ=121° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.3	20.2	98	64	7	6	------	
2	29.7	20.5	97	69	9	7	------	
3	29.8	20.5	98	76	7	8	5.6	● p.
4	29.5	20.6	------	89	7	6	10.4	● a. p p.
5	28.7	19.2	98	73	7	7	12.2	☽ a. p.
6	28.5	20.3	99	73	8	7	5.6	● a. p.
7	29.2	20.7	95	68	9	4	------	☽ a. p.
8	29.4	20.5	96	65	10	6	------	
9	30.1	20.6	96	74	7	6	------	
10	31	20.2	98	70	1	6	------	
11	31	21	98	69	7	6	------	
12	29.7	19.6	90	73	6	9	------	
13	30.2	18.7	98	71	7	10	------	
14	30.4	------	96	71	6	6	------	
15	31.5	20.9	96	58	5	6	6.9	● a.
16	31.4	21.2	97	60	6	6	------	☽ a.
17	------	19.7	97	59	9	3	------	
18	31.9	------	98	59	7	6	------	
19	31.8	------	94	61	6	6	1.3	p a.
20	32.5	19.4	98	58	10	6	------	
21	32.2	20.4	91	63	8	6	------	
22	------	19.3	93	60	6	6	------	
23	31.8	21.2	96	64	7	6	------	
24	------	20.2	96	62	6	6	74.2	● p.
25	29.9	20.2	98	80	10	7	2.5	p a.
26	32.4	20	94	70	6	7	23.7	● a. p p.
27	31.9	21.6	90	64	8	6	------	
28	30.2	21.5	92	73	6	7	6.9	● p.
29	30.2	20.6	97	65	7	6	------	☽ a. p.
30	30.4	20.7	97	68	10	6	9.1	☽ a. ● p.
Mean	30.5	20.4	95.9	67.6	7.2	6.3	------	
Total	------	------	------	------	------	------	158.4	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	19	92	60	2	5	------	
2	------	18.5	92	54	1	3	------	
3	------	18.4	96	59	1	3	------	≡ a.
4	------	18.1	89	75	4	10	------	d p.
5	------	19.8	93	65	2	8	------	
6	------	21.8	79	62	6	6	------	
7	------	21	78	56	2	4	------	
8	------	19.2	93	61	1	6	------	p p.
9	------	21.5	96	65	0	3	------	≡ a.
10	------	19.7	97	64	0	1	------	
11	------	20.8	95	68	1	3	------	≡ a. ↙ p.
12	------	21.4	97	64	5	4	------	≡ a. ↙ p.
13	------	21	95	68	7	9	------	⌐ d p.
14	------	21.7	96	62	1	2	------	
15	------	20.8	96	64	1	3	16	⌐ ☽ ● p,
16	------	21.4	96	60	3	5	------	
17	------	22.1	95	62	2	3	------	
18	------	22.9	92	68	1	2	------	⊤ ↙ p.
19	------	22.5	93	67	9	10	------	⊤ ☾ p.
20	------	22.9	96	70	5	5	------	≡ a. ⌐ d p.
21	------	21.8	94	63	2	7	------	≡ a. ⊕ p.
22	------	23	95	69	8	10	.3	⌐ d° ☾ p.
23	------	21.4	95	65	10	9	35.1	⌐ ● p.
24	------	22.8	86	71	10	10	.8	d a. p. ⌐ d p.
25	------	22.4	95	95	10	10	55.3	●² a. p.
26	------	22.3	89	68	4	5	------	⌐ d p.
27	------	21.8	96	77	4	9	------	⌐ d p.
28	------	21.8	96	67	5	4	------	☊ a. ⌐ d p.
29	------	22.5	80	53	2	3	------	
30	------	22.7	87	61	1	3	------	↙ p.
Mean	------	21.2	92.3	65.4	3.7	5.5	------	
Total	------	------	------	------	------	------	107.5	

TARLAC

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35	20.5	86	45	4	4	------	☊ a.
2	35.2	20.1	93	52	3	5	------	☊ a.
3	37	21	93	46	4	4	1.3	☊ a. ● p.
4	33.2	20.9	95	58	4	10	------	☊ a.
5	35	20.8	94	45	2	7	------	☊ a.
6	35.4	21.8	89	45	5	6	------	☊ a.
7	35.6	20.3	92	45	2	3	------	☊ a.
8	36.4	20.5	95	42	5	4	------	☊ a. d p.
9	36.2	21.6	93	41	4	3	------	☊ a.
10	36.6	20.5	91	42	5	4	------	☊ a.
11	37.4	20.5	96	40	5	4	------	☊ a. ⌐ d p.
12	37.4	22.2	94	40	9	4	------	☊ a.
13	36.5	23.9	90	46	10	7	------	☊ a. d ⌐ d p.
14	37	22.8	95	44	1	8	------	☊ a.
15	37.8	21.5	95	39	5	9	------	☊ a. d° p.
16	36.8	22.2	96	42	4	4	------	☊ a.
17	37.8	23	96	44	10	5	------	☊ a.
18	38.5	23.1	95	39	4	3	------	☊ a.
19	37.1	23.4	94	42	5	5	------	☊ a.
20	37.7	24.4	90	40	6	4	56.4	☊ a. ● ⌐ d p.
21	35	22.2	97	50	10	10	------	
22	33.4	24	96	59	10	10	------	☊ a.
23	35.5	23.4	92	52	9	9	1.3	☊ a. ⊤ ● ϖ p.
24	27.2	23.6	92	84	10	10	20.8	d° a. p. ● p.
25	24.2	22.9	93	90	10	10	3.5	● ⌐ d p.
26	34.2	21.7	96	53	5	4	------	☊ a. ⊤ p.
27	34.5	22.8	95	56	8	8	.3	☊ a. ⊤ d° p.
28	34.8	23	96	50	4	2	------	☊ a.
29	35.7	21.5	95	46	3	2	------	☊ a.
30	34.9	22.5	94	49	5	4	------	☊ a. ↙ p.
Mean	35.3	22.1	93.6	48.9	5.7	5.7	------	
Total	------	------	------	------	------	------	83.6	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	22.1	91	65	2	2	------	☊° a.
2	32.8	------	87	64	1	2	------	☊° a.
3	32.5	24.3	88	64	3	2	------	☊° a.
4	33.3	22.5	91	59	2	5	------	☊° a.
5	33.1	23.2	90	63	2	3	------	☊° a.
6	32.7	22.5	84	63	2	1	------	☊° a.
7	33	22.1	81	61	2	2	------	
8	33	23.4	81	62	1	1	------	
9	35.2	23.7	81	50	1	2	------	
10	34.5	24	82	55	2	1	------	
11	33.1	22.8	87	58	1	1	------	
12	32.7	22	89	59	2	2	------	
13	33.1	23	80	61	6	3	------	
14	33.3	24.2	93	62	1	3	------	
15	34.9	24	83	57	2	1	------	
16	33.4	23.6	87	63	2	2	2	●° p.
17	33.1	23.3	93	64	2	2	------	
18	33	23.6	91	62	1	1	------	
19	32.9	24.6	87	61	1	3	------	ϖ² p.
20	34.2	24.6	89	62	3	2	------	☾° p.
21	34.6	23	82	66	2	8	------	
22	34	------	90	------	5	6	------	d° ⌐ d° p.
23	32.9	22.4	92	65	6	3	------	⊤² p.
24	34.5	23.7	81	56	9	6	------	d° ⊤° p.
25	28.3	24.5	81	84	10	10	2.5	●° a.
26	33.7	24.3	84	63	3	7	------	
27	34.3	------	97	67	2	5	.8	⊤² ●° p.
28	33.6	22.4	91	62	3	3	------	
29	34.2	24.2	79	57	2	2	------	☽² p.
30	35.6	22.9	87	58	1	2	------	↙² p.
Mean	33.4	23.4	86.6	61.8	2.7	3.1	------	
Total	------	------	------	------	------	------	5.3	

METEOROLOGICAL DATA, ETC.—Continued.

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.9	19.7	97	51	1	4	------	☊² a.
2	31.4	19.8	96	58	3	9	------	☊² a. d p.
3	33	19.8	96	50	2	6	------	☾° p.
4	32.3	21.3	95	54	8	9	------	☾° p.
5	31.2	20	97	55	4	9	------	☊² a.
6	32.4	20.5	96	53	8	5	------	☊°a. ☾°d°◠°p.
7	33.8	19.9	96	49	1	3	------	☊² a. ☾° p.
8	36.2	19.7	98	47	1	1	------	☊° a.
9	36.2	19.9	96	43	1	2	------	☊² a.
10	37.5?	20.3	93	41	2	1	------	☊² a.
11	36.1	21.9	87	44	10	2	------	☐☿° p.
12	33.9	22.9	90	49	10	2	24.9	☐☿° ●² p.
13	31.6	22.8	95	76	10	9	2.3	●²a. d²●☐☿°p.
14	36.3	22.9	98	57	9	3	------	☾° p.
15	33.5	22	95	57	10	5	------	☊² a. ☾° ♁° p.
16	37.2	21.6	94	54	2	2	------	☾° p.
17	37.3?	22.4	92	49	3	2	------	
18	36.6	24.3	93	60	9	3	------	☐☿° ☄° p.
19	33.5	23.5	92	54	9	5	------	☌° a. ☐☿° p.
20	------	24	91	55	10	3	------	☐☿° p.
21	32.1	23.3	97	62	10	9	------	☐☿° p.
22	32.9	23.4	96	57	10	6	18.8	☌°a. ☐☿°●²d²p.
23	30.9	22.2	99	75	10	10	19.8	☌² ☥° ●° p.
24	30.8	22.7	100	83	10	10	32	● d a. p.
25	26.1	21.8	98	85	10	10	13.7	☥° a. d a. p. ☐☿°
26	31.2	22.3	99	67	3	9	------	☽°☥°a. ☐☿°☾²
27	33	21.7	99	68	10	7	1.3	☰²☥°a. ☐☿°d²p.
28	35.5	21.6	100	63	10	3	2	☰²a. ☾°d² ◠°p.
29	36.8	20.9	95	56	1	2	------	☊² a.
30	34	21.3	95	58	1	4	------	☊² a. ☾° p.
Mean	33.7	21.7	95.5	57.8	6.3	5.2	------	
Total	------	------	------	------	------	------	114.8	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	23.9	73	56	2	1	------	☊ a.
2	31.7	24	76	62	3	4	------	☊² a.
3	31.6	25	77	65	8	5	------	☊ a. ☥° a. p.
4	31	25	79	64	3	8	------	☊ a. ☾ p.
5	31.8	24.5	78	61	4	6	------	☊ a.
6	31.5	26	76	64	4	5	------	
7	32.2	25	81	55	2	3	------	☊ a. ☾ p.
8	32.2	25	76	57	4	2	------	☊ a. d p.
9	32	26.5	74	57	4	0	------	☊ a. ☾ p.
10	32.4	25.5	76	51	7	0	------	☊ ☥° a. ☾ p.
11	31.7	24.3	74	54	0	0	------	☊ a. ☾ p.
12	31.7	23	75	59	2	5	------	☊² a. ☾ p.
13	31.7	23.5	77	54	2	3	------	☊² a. ☾ p.
14	32	24.8	76	60	9	3	------	☊ a. ☥° p.
15	32.2	25.2	75	63	2	4	------	☊ a. ◠° p.
16	32.2	24.5	75	62	2	4	------	☊ a. ☥° ☾ p.
17	32.2	24.7	77	57	5	2	------	☊ a.
18	32.6	25	76	54	4	0	------	☊ a. ☾ ♁ p.
19	31.8	24.5	77	55	2	4	------	☊ a.
20	32.6	26.2	76	60	6	2	------	☊ a. ☾ p.
21	31.7	25	77	64	4	9	------	☊ a. ☾ ♁ p.
22	32.5	24.4	76	52	5	4	------	☊ a. d p.
23	32.8	26	69	55	9	4	------	☊ a. ☥²◠°☾ p.
24	32.1	25.2	72	66	9	9	------	☊ a. ☥² d° p.
25	28.7	26	77	71	9	10	1	d a. ●° p.
26	31.7	24.4	82	63	9	10	------	☥° p.
27	32.1	24.7	80	54	5	5	1	☥° ●° ◠° p.
28	32.7	23.9	78	57	3	4	------	☊ a. ☥° ☾ p.
29	31.9	25.8	73	62	3	4	15.2	☥° ● ◠° p.
30	31.8	24.2	83	59	1	0	------	☥° ☾ p.
Mean	31.9	24.9	76.4	59.1	4.4	4	------	
Total	------	------	------	------	------	------	17.2	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.4	22.6	92	59	1	1	------	☊ a.
2	32.3	22.8	91	64	0	5	------	☊° a. ☥ p.
3	33.8	23.4	91	61	0	2	------	☾ p.
4	33.7	23.5	92	66	0	5	------	☥ p.
5	35	23	93	52	0	1	------	☊² a.
6	35.2	23.4	87	53	1	2	------	
7	33.9	22.6	82	63	0	1	------	
8	34.3	23.2	88	65	0	2	------	
9	34.4	24.2	92	60	0	2	------	☊° a. ☐☿ p.
10	33.4	23	89	63	2	2	------	☊° a.
11	34.1	20.9	92	57	0	3	------	☊ a.
12	35.3	20.9	86	56	1	5	------	
13	33.6	24	84	67	4	10	5.1	● p.
14	33.4	21.5	92	64	0	2	------	☊° a. ☾ p.
15	33.3	23	90	68	3	4	------	☐☿ p.
16	35.2	23.4	88	62	0	3	------	☥ ☾ p.
17	33.7	23.2	97	61	1	1	------	☊² ≡ a.
18	33.5	23.4	89	69	0	1	------	☊° a.
19	34.3	23.9	89	48	6	0	------	
20	33.8	23.2	87	51	4	1	------	☾ p.
21	34.6	23.4	87	63	3	10	------	☊° a. ☾ p.
22	35	24.3	87	44	4	4	------	◠ a.
23	33.3	23.6	81	57	1	3	------	☥ p.
24	34.3	23.7	86	57	1	5	------	☥ d p.
25	36	26	89	69	10	10	2.5	d a. ☥ ● p.
26	31.2	23.2	97	67	9	9	2	● a.
27	34.5	23.5	88	57	2	5	------	☥ p.
28	35.4	24.2	84	66	0	3	------	☐☿ p.
29	34.4	24.1	88	68	1	9	------	☐☿ p.
30	35.3	23.1	93	50	0	3	.8	☊ a. ☐☿² ●° p.
Mean	34.2	23.3	89	60.2	1.8	3.8	------	
Total	------	------	------	------	------	------	10.4	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.2	24	88	71	4	4	------	
2	29.5	24.2	88	73	8	9	------	☌° ◠ a.
3	29.6	24.2	83	79	8	9	.2	☌° ☾° p.
4	29.4	23.7	87	81	10	10	2	☌° a. p.
5	29.6	24.1	83	64	2	2	3.8	☾ ●° p.
6	27.4	22.7	84	85	3	10	5.4	☌² ☾° p.
7	29	22.5	85	77	10	10	.9	d p.
8	29.9	23.9	90	72	8	1	------	◠° a.
9	29.4	23.5	86	71	1	4	------	☌° p.
10	31.2	24.7	85	71	7	1	------	☊ p.
11	27	23.3	87	75	2	8	1.9	☌° a. p.
12	22.9	21	87	82	10	10	5.9	◠ a. ☌° a. p.
13	26.8	20.2	82	85	10	10	1.6	d a. p.
14	28.6	21.9	87	76	10	9	6.9	● p.
15	29.2	23.5	88	77	10	3	6.4	● a. p.
16	30	24.3	90	80	3	8	------	● d a.
17	29.9	24.3	93	76	3	3	------	
18	29.3	25	80	73	4	2	------	☌° p.
19	28	23	80	71	8	7	------	
20	29.1	22	89	70	2	5	------	
21	28.8	23.4	77	68	8	10	------	☌° p.
22	30	24	73	62	9	4	------	☌° p.
23	30.4	24.9	84	71	4	4	------	☌° p.
24	29.6	25.6	84	79	7	6	------	●° p.
25	29.4	24.6	89	82	10	8	2.2	☌° a. ●° p.
26	28.9	24.4	90	77	8	9	49.1	● a. p. ☐☿° p.
27	30.4	22.2	88	76	10	4	2.3	d a. ☊ p.
28	31.5	25.3	91	74	9	4	.3	d a.
29	30.5	23.4	93	75	8	3	25.1	●☥va. ☾°☊°p.
30	30.2	24.9	85	77	2	4	------	☌° p.
Mean	29.2	23.6	85.9	75	6.6	6	------	
Total	------	------	------	------	------	------	114	

SEISMOLOGICAL BULLETIN FOR APRIL, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

2, $17^h\ 9^m$. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction WSW–ENE; intensity V; duration 10 seconds. The point of origin of this disturbance must have been at a very shallow depth, because, although it was very intense in Butuan, stopping clocks, splashing water over the rims of the containers, and greatly alarming the people by the suddenness of the strong shocks, it was not felt at all either at Surigao or at Cagayan, two stations of the Weather Bureau, each about 100 kilometers from Butuan. Nor did the seismographs of Manila or those of any other observatory in the Far East register the disturbance. The noise which accompanied this earthquake (Degree VII of Davison's scale) was very extraordinary, and it was noticed clearly that the sound waves were propagated from WSW to ENE. At $17^h\ 30^m$ occurred a repetition of intensity III.

4, $6^h\ 41^m$. **Sumay** (Guam Island). Earthquake of intensity III.

5, $2^h\ 20^m$. **Butuan** (N of Mindanao). Earthquake of intensity III, accompanied by subterranean rumbling coming from the south. At $2^h\ 45^m$ there was a repetition characterized by the same intensity and subterranean noise.

5, $6^h\ 57^m$. **Sumay** (Guam Island). Earthquake of intensity IV.

10, $9^h\ 12^m\ 14^s$.* **Nueva Caceres** (Camarines). Oscillatory earthquake. Direction E–W; intensity III; duration 6 seconds.

12, $8^h\ 24^m\ 38^s$.* **Santo Domingo** (Batanes Islands). Oscillatory and trepidatory earthquake, accompanied by subterranean rumblings. Direction N–S; intensity IV; duration 10 seconds. This earthquake was likewise perceptible in the northernmost part of Luzon Island, where it had force II. Its epicenter appears to have been in the northern part of Formosa or near it. Unfortunately we have only vague notices concerning the phenomenon from the said island; we do not know the precise district of northern Formosa in which the disturbance developed its greatest intensity, and still less the extent of the meizoseismal area. But the silence of the press and news agencies in Japan and the principal ports of the China coast on the subject seems to indicate that the earthquake has not been disastrous.

This same earthquake was also felt in Zikawei Observatory with an intensity between I and II. Hence it had a radius of action about 1,400 kilometers in length. Considering the extent of territory throughout which it was perceptible, we must certainly class this disturbance with the great earthquakes. The almost equal intensities observed at Aparri (NE of Luzon) and Zikawei

[1] **The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.**

locate the epicenter in a region about midway between these two stations, which corresponds approximately to northern Formosa. The same position appears to be indicated by the times at which the seismographs of Zikawei, Manila, Tsingtau, Osaka, and Batavia began to register the quake, and were as follows:

Station.	Beginning.			End.	
	h.	*m.*	*s.*	*h.*	*m.*
Zikawei	8	23	40	9	45
Manila	8	24	38	10	10
Tsingtau	8	24	50	10	20
Osaka	8	25	25	9	37
Batavia	8	28	49	9	58

The differences in the hours given for the first four stations correspond very closely to the differences in the distances of these stations from an epicenter near northern Formosa, if we suppose that the first waves had a velocity of 8.66—7.88 kilometers per second. Now these values are precisely those which have been deduced recently by Professor Omori from earthquakes which had their origin in Formosa.[1]

Hence it would appear to be beyond doubt that the seismic movements felt in Santo Domingo, Aparri, and Shanghai were due to one and the same earthquake, whose epicentral region must have been a very long and narrow belt in the neighborhood of the eastern coast of northern Formosa, probably along the one hundred and twenty-second meridian east, or very near it. Otherwise it is scarcely intelligible why, as far as we know, the earthquake has not been felt very intensely in the nearby ports on the China coast, Swatow, Amoy, Foochow, etc.

12, $23^h\ 53^m$. **Laoag** (NW of Luzon). Oscillatory earthquake. Direction NE–SW; intensity III; duration 5 seconds.

15, $4^h\ 30^m$. **Legaspi** (SE of Luzon). Oscillatory earthquake. Direction N–S; intensity III; duration 8 seconds.

19, $3^h\ 30^m\ 13^s$.* **Vigan** (NW of Luzon). Earthquake of intensity III.

29, $9^h\ 38^m\ 45^s$.* **Iloilo** (Panay Island). Oscillatory earthquake. Direction SW–NE; intensity III; duration 6 seconds.

[1] Bulletin of the Imperial Earthquake Investigation Committee, Vol. III, No. 2.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight =0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2 a.)	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
			V.	21 53 54	----------	21 58 02	21 59 21	0.02	6.4	22 26	
58	1	II_r	H. NNW	21 53 57	----------	21 58 01	21 58 51	.80	12.6	22 24	
			H. WSW	21 53 57	----------	21 58 03	21 59 20	.31	12.6	22 24	
59	2	I_d	V.	14 24 03	----------	14 24 24	14 24 28	.08	2.4	14 27	Vertical Component 0.01 mm.
60	6	I_d	V.	4 50 13	----------	4 50 32	4 50 45	.05	2.2	4 53	V. C. 0.01 mm.
61	10	I_v	V.	9 12 14	----------	9 12 43	9 12 48	.22	2.4	9 18	V. C. 0.05 mm. Earthquake, III at Nueva Caceres (Camarines).
			V.	8 24 38	----------	8 26 42	8 27 23	1.88	2	10 10	V. C. 0.24 mm. Earthquake in northern Formosa and Batanes Islands.
62	12	III_r	H. NNW	8 24 38	----------	8 26 41	----------	-------	------	10 10	
			H. WSW	8 24 38	----------	8 26 41	----------	-------	------	10 10	
63	12	I_d	V.	18 38 28	----------	18 38 41	18 39 09	.14	2.4	18 42	V. C. 0.03 mm.
			V.	20 34 56	20 39 06	20 42 38	20 43 54	.03	8	21 20	V. C. 0.01 mm. Earthquake, in Banda Islands.
64	16	II_r	H. NNW	20 34 56	20 39 06	20 42 29	20 44 14	.33	10.8	21 21	
			H. WSW	20 34 56	20 39 07	20 42 35	20 45 11	.41	10.2	21 22	
65	17	I_d	V.	0 37 53	----------	0 38 00	0 38 02	.02	2	0 41	
66	18	I_d	V.	13 01 02	----------	13 01 26	13 01 41	.04	2	13 04	V. C. 0.01 mm.
67	19	I_v	V.	3 30 13	----------	3 30 32	3 30 33	.06	2.2	3 33	V. C. 0.02 mm. Earthquake, III at Vigan (NW of Luzon).
68	19	I_d	V.	22 17 43	----------	22 18 03	22 18 34	.01	2.2	22 20	
69	20	I_d	V.	9 51 27	----------	9 51 56	9 51 59	.08	2.4	9 56	V. C. 0.06 mm.
			V.	6 32 41	----------	6 41 26	6 42 00	.02	6.8	7 09	
70	21	I_r	H. NNW	6 32 45	----------	6 41 32	6 42 49	.18	9	7 12	
			H. WSW	6 32 45	----------	6 41 31	6 42 39	.13	8.7	7 12	
71	21	I_d	V.	15 23 25	----------	15 25 51	15 26 07	.04	2.4	15 28	V. C. 0.01 mm.
72	22	I_d	V.	2 00 45	----------	2 00 55	2 00 59	.06	2	2 04	V. C. 0.02 mm.
73	29	I_v	V.	9 38 45	----------	9 39 09	9 39 28	.03	2.4	9 44	Earthquake, III at Iloilo (Panay Island).
74	29	I_d	V.	11 14 21	----------	11 14 42	11 14 44	.04	2	11 18	V. C. 0.06 mm.

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation, NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only four to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

2, 17h 09m. **Butúan** (N. de Mindanao). Temblor oscilatorio. Dirección WSW–ENE; intensidad V; duración 10 segundos. El origen de este temblor debió ser muy superficial, puesto que habiendo tenido mucha intensidad en Butúan, donde paró relojes, é hizo saltar el agua de los depósitos y causó grande alarma por lo repentino de los fuertes choques, no se sintió en ninguna de las dos estaciones del Weather Bureau, Surigao y Cagayán, que distan de Butúan unos 100 kilómetros. Tampoco lo registraron los microseismógrafos de Manila ni de ningún otro Observatorio del Extremo Oriente. Fué muy extraordinario el ruído (grado VII de Davison) que acompañó este temblor, el cual notaron distintamente que se propagaba de WSW á ENE. Á 17h 30m hubo una repetición de intensidad III.

4, 6h 41m. **Sumay** (Isla de Guam). Temblor de tierra de intensidad III.

5, 2h 20m. **Butúan** (N de Mindanao). Temblor de tierra de intensidad III, acompañado de ruído subterráneo procedente del S. Á 2h 45m repitió con la misma intensidad y ruído subterráneo.

5, 6h 57m. **Sumay** (Isla de Guam). Temblor de tierra de intensidad IV.

10, 9h 12m 14s.* **Nueva Cáceres** (Camarines). Temblor oscilatorio, dirección E–W, intensidad III, duración 6 segundos.

12, 8h 24m 38s.* **Santo Domingo** (Islas Batanes). Temblor oscilatorio y trepidatorio, dirección N–S, intensidad IV, duración 10 segundos, acompañado de ruído subterráneo. Este temblor fué también perceptible en el extremo N de Luzón con intensidad II. Su epicentro parece se hallaba en el N de la Isla de Formosa ó cerca de ella; no tenemos de esa isla más que datos vagos. No sabemos con precisión ni el distrito del N de Formosa donde se sintió con más intensidad, ni mucho menos á cuanto ésta llegó, sin embargo el mismo silencio de las publicaciones y agencias de noticias de Japón y puertos principales de la China puede indicar que no fué un terremoto desastroso. El mismo terremoto fué también perceptible en el Observatorio de Zikawei con intensidad comprendida entre I y II; de manera que tuvo un radio de acción de unos 1,400 kilómetros de longitud. Si consideramos pues la extensión del área en que fué perceptible puede ciertamente considerarse como un gran terremoto. Las intensidades casi iguales observadas en Aparri (NE de Luzón) y en Zikawei colocan el epicentro hacia una región intermedia entre ambas estaciones, esta región viene á caer próximamente en la parte N de Formosa. La misma situación parecen dar las horas en que el temblor comenzó á registrarse por los seismógrafos de Zikawei, Manila, Tsingtau, Osaka y Batavia que ponemos á continuación:

Estación.	Principio.			Fin.	
	h.	*m.*	*s.*	*h.*	*m.*
Zikawei	8	23	40	9	45
Manila	8	24	38	10	10
Tsingtau	8	24	50	10	20
Osaka	8	25	25	9	37
Batavia	8	28	49	9	58

Las diferencias entre las horas de las cuatro primeras estaciones vienen á corresponder con mucha aproximación á sus respectivas diferencias en distancia á un epicentro situado cerca del N de Formosa, si se da á las primeras ondas una velocidad comprendida entre 8.66 y 7.88 kiló-

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

metros por segundo, que son valores hallados recientemente por el Seismólogo Omori para varios terremotos originados en Formosa.[1]

Por consiguiente, parece que no hay duda de que los movimientos seísmicos percibidos en Santo Domingo, Aparri y Shanghai corresponden á un mismo terremoto, cuya área central debió ser una franja ó línea muy prolongada, no lejos de la parte oriental del N de Formosa, probablemente á lo largo del meridiano 122° E ó muy cerca de él. De no ser así, apenas se comprende cómo no fué sentido, que sepamos, con mucha intensidad en los vecinos puertos de la costa de China, Swatow, Emuy, Foochow, etc.

12, 23^h 53^m. **Laoag** (NW de Luzón). Temblor oscilatorio, Dirección NE–SW; intensidad III; duración 5 segundos.

15, 4^h 30^m. **Legaspi** (SE de Luzón). Temblor oscilatorio. Dirección N–S; intensidad III; duración 8 segundos.

19, 3^h 30^m 13^s.* **Vigan** (NW de Luzón). Temblor de tierra de intensidad III.

29, 9^h 38^m 45^s.* **Iloílo** (Isla de Panay). Temblor oscilatorio. Dirección SW–NE; intensidad III; duración 6 segundos.

[1] Bulletin of the Imp. Earthq. Invest. Comm. Vol. III, No. 2.

BULLETIN FOR MAY, 1910.

METEOROLOGICAL BULLETIN FOR MAY, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The mean atmospheric pressure for this month is somewhat below that of May, 1909. The monthly mean for Manila differs from the normal of May by —0.78 millimeter. The highest pressures were recorded at all our stations on the 20th or 21st. The lowest pressures took place on the 6th, 7th, or 8th, if we except the stations along the western coast of northern Luzon, where they were observed on the 25th.

With a few exceptions, the monthly mean temperature is likewise somewhat below that of the preceding year. The monthly mean for Manila differs from the normal of this month by —1.1° C. The extreme values of temperature, as registered at the Central Observatory, were 34.4° C and 21° C.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR MAY, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from May, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from May, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	757.26	—0.72?	759.02	20	756.06	6	28.1	+0.1	35.4	27	22.7	31
Surigao	57.77[2]	— .49			56.38	6	27.2[3]		34.2	27	22.1	16
Cebu	57.76	— .43	59.92	20	56.41	8	27.6	— .7	33	18	21.4	.29
Iloilo	58.05	— .07	60.10	20	56.67	8	27.6	— .5	33.5	1, 5, 13	22	15
Ormoc	57.97	— .20	60.10	20	56.50	6	26.3	— .2	32.8	4	20.2	16
Tacloban	58.35	— .26	60.43	20	56.51	6	27.6	— .5	34.2	16	23.4	3, 11
Calbayog	58.18	— .55	60.36	20	56.01	6	26.9	+ .5	34.2	27	21.9	15
Legaspi	57.74	— .70	59.91	20	55.05	6	27.7	— .7	35.3	29	21.1	15
Atimonan	57.52	— .70	59.58	21	54.14	7	28.1	0	34.7	9, 10	22.5	9
Manila	57.58	— .53	59.62	20	54.71	7	27.4	— .8	34.4	5, 12, 22	21	18
San Isidro	57.43	— .59	59.43	20	54.44	7	27.7	— .4	35.9	22	22	1
Dagupan	57.25	— .70	59.21	20	54.32	7	27.7	— .8	36.8	4	22.7	1
Bolinao	57.03	—1.01	59.05	20	53.80	25	27.7	— .6	34.5	21	22.5	25
Baguio[4]	635.59		637.26	20	632.84	7	18.1		25.4	19	15	29
Vigan	757.20	— .89	759.50	20	753.48	25	27.5	— .8	34.9	6	22.4	25
Tuguegarao	57.17	— .96	59.78	21	52.48	7	27.4	—1	36.5	14, 19	20	16
Aparri	57.44	—1.05	60.11	21	51.94	7	26.7	— .7	33.7	19	21	26

[1] The barometric readings of this station seem to be too low.
[2] From twenty-eight days only.
[3] From nineteen days only.
[4] The barometric readings of this station are not reduced to sea level.

Precipitation.—The monthly rainfall is generally greater than that of May, 1909. As shown in the following table, only 16 stations reported a monthly amount of rainfall below that of the preceding year. The amount of water collected this month in the rain gauges of the Manila Observatory is greater than the normal for May by 80.3 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF MAY, 1910.

Station.	Total.	Departure from May, 1909.	Rainy days.	Departure from May, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from May, 1909.	Rainy days.	Departure from May, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	180	+ 76.3	10	— 5	56.9	3	Legaspi	51.3	— 35	13	+ 1	19.1	20
Isabela, Basilan	41.1	—101.7	7	—14	18.3	3	Sumay, Guam	243.7	+183.4	20	+ 7	106.7	15
Zamboanga	37.4	— 60.2	7	— 4	26.2	10	Calapan	102.5	—195.2	13	— 4	24.4	2
Davao	546.3	+208.5	18	+ 3	48.5	1	Virac	62.5	— 89.2	9	—14	26.2	5
Cotabato	180.8	+ 15	14	+ 2	50.8	2	Nueva Caceres	96.7	— 36.4	12	+ 2	34.7	24
Cagayan, Misamis	157.9	+ 81.3	13	— 3	65	18	Batangas	116.7	— 68.4	9	— 4	36.6	28
Dapitan	82.8	+ 59.7	6	0	37.8	3	Atimonan	116	—146	13	+ 1	58.4	24
Butuan	110.2	+ 12.6	14	— 2	35.6	18	Silang	243.4	— 17.4	12	+ 2	49.5	26
Dumaguete	15.8	-------	8	------	4.6	11	Santa Cruz, La Laguna	186.7	-------	16	------	50.6	31
Yap, W. Carolines	879.4	-------	16	------	223.5	2	San Antonio	184	+ 62.1	11	— 1	36.8	6
Tagbilaran	98.5	+ 41.6	10	+ 3	71.1	20	Manila	192.5	+ 94.5	15	+ 3	50.8	18
Surigao	37.9	— 45.4	4	—11	13.5	1	Iba	756.6	-------	17	------	169.7	24
Maasin	132.6	+ 63	5	0	56.1	4	San Isidro	213.6	+ 90.9	17	+ 2	46.5	13
Cebu	139.1	+ 96.6	10	+ 3	43.2	28	Tarlac	329.9	+ 86.6	15	— 5	57.4	13
Iloilo	271.9	+101.8	13	— 4	59.4	22	Dagupan	360.8	+154.7	18	+ 3	95.5	24
San Jose Buenavista	161.5	—129.4	18	— 4	39.9	3	Bolinao	872.2	+582.8	16	0	380	24
Cuyo	348.5	-------	12	------	213.9	31	Baguio	542.8	+ 71.1	21	0	110.2	25
Ormoc	74.2	+ 17.5	12	+ 3	14.5	3	San Fernando, Union	482	+217.6	14	+ 1	99.1	25
Tacloban	155.1	+ 49	16	0	46.2	10	Echagüe	144.8	— 74.6	16	+ 1	37.6	27
Borongan	178.9	— 16.1	13	— 4	41.6	30	Candon	509	+244.3	17	0	207.2	25
Calbayog	173.6	— 15.2	15	— 3	38.1	24	Vigan	436.8	+280.6	12	— 3	193.7	25
Masbate	162.6	+ 78.2	13	+ 4	51.6	18	Tuguegarao	377	+248.3	15	+ 1	111.2	6
Romblon	119.1	— 10.5	16	— 2	34	4	Laoag	365.4	+220.1	11	— 1	86.6	23
Laoang	140	+ 44.7	16	— 6	58.4	20	Aparri	193.3	+ 22.2	13	— 1	42.9	25
Gubat	27	— 78.5	9	+ 1	6.1	1	Sto. Domingo, Batanes Is	357	+176.7	11	— 5	76.1	25

DEPRESSIONS AND TYPHOONS.

Only one depression or typhoon crossed the Philippines during the month of May, traversing the Balintang Channel toward northeast. Another typhoon passed not far from northeastern Luzon and the Batanes Islands, moving northward and tending to recurve. Besides these, two other typhoons were noticed in the Pacific: they did not influence at all or at the outmost very slightly, the weather in the Philippines, but were felt well in the Western Carolines.

TYPHOONS OF APRIL 29 TO MAY 13, 1910.

If we had only the observations of Yap, Western Carolines, and those of the Philippines, we would have assumed as almost certain that there was only one typhoon in the Pacific during the first week of May. Yet the observations made on board the steamers *Coblenz* and *Craigvar* tend to prove that there were two simultaneous typhoons in the Western Carolines. One of them recurved northeastward not far from Yap, the other approached rather close to the northernmost part of the Philippines until it recurved likewise northeastward to the east of Balintang Channel.

In the following table our readers may see some of the valuable observations taken at Yap during May 1 to 4.

METEOROLOGICAL OBSERVATIONS MADE AT YAP (WESTERN CAROLINES), MAY 1 TO 4, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Lower clouds.		Sea.		Weather.	Rainfall (daily total).
			Direction.	Force.	Form.	Direction.	State.	Direction.		
May 1:	*mm.*	*mm.*		*1-02.*						*mm.*
6 a. m	755.52	—2.31	NEbyN	3	Fr.-N.	NE	L	NNE	o	
2 p. m	54.97	—1.48	NEbyN	3	Fr.-N.	NE	M	ENE	o, d	102.3
May 2:										
6 a. m	54.56	—0.96	ENE	4	Fr.-N.	NE	M	ENE	q	
Noon	54.58	—1.52	ENE	7	N.	ESE	M	E	q	
2 p. m	53.18	—1.79	EbyN	6	N.	ENE?	M	EbyS	o, d	
4 p. m	52.99	—1.83	E	5	Fr.-N.	SE	M	SE	o, d	
6 p. m	53.49	—2.28	ESE	5	Fr.-N.	SE			q	
8 p. m	54.42	—1.98	SEbyE	5	N.				q	
Midnight	54.35	—1.95	SE	6	N.				q	223.5
May 3:										
4 a. m	52.47	—1.92	SE	6	N.				q	
6 a. m	53.57	—0.99	SE	6	N.	SSE	M	SEbyS	q	
7.30 a. m	54.81	—0.59	SSE	8	N.	SSE			q	
10 a. m	54.65	—0.75	SSE	5	Fr.-N.	SE	M	SSE	o	207.5
May 4:										
6 a. m	55.47	+1.90	S	3	S.-cf	S	B	S	o, r	
2 p. m	56.31	+2.44	SW	1	Cu.		T		o, d	27.1

In Plate II we give the route followed by the steamers *Coblenz* and *Craigvar,* together with the barometric minimum and the winds observed on each of them. After a careful examination of the observations made on these steamers and at Yap, we came to the following probable conclusions: (1) In the afternoon of the 2d a typhoon passed between Yap and the *Coblenz,* this steamer being at its shortest distance from the cyclonic center in the early morning of the 3d, when the barometric minimum took place and the winds were blowing from south (see ship's position at the time, Plate II); (2) another typhoon passed on the 3d between Yap and the *Craigvar,* attaining its shortest distance from both in the early morning and at 6 p. m., respectively (see the *Craigvar's* position at 6 p. m., Plate II).

With this supposition it is easy to understand why, in the early morning of the 3d, the barometric minimum of Yap was somewhat below the minimum of the preceding afternoon, although on the 2d the winds had veered from NE to SE; a fact which clearly showed that at 8 p. m. of the 2d the vortex was already situated to the west-southwest of that station. The minimum of the 3d was due to the second typhoon. The winds observed in the early morning of the 3d were rather a resultant of the winds due to both typhoons.

The first of these typhoons recurved, it would seem, north and north-northeast, during the 3d and the 4th, and probably filled up on the 6th to the west of the Ladrone Islands.

The second typhoon moved west-northwest when passing south of Yap: then inclined northward for a while, this being the only possible explanation of the winds from NW observed on the *Craigvar* at the time of the barometric minimum. On the 4th it inclined again westward moving to WNW and NW until the 7th, when it began to move northward and recurve northeastward to the east of northern Luzon and the Balintang Channel.

The following table contains the observations made at Santo Domingo, Batanes Islands, during the 6th, 7th, and 8th:

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO (BATANES ISLANDS), MAY 6 TO 8, 1910.

Date and hour.	Pressure.	Wind.		Cloudiness.	Lower clouds.		State of the sea.	Rainfall (daily total).
		Direction.	Force.		Form.	Direction.		
May 6:	*mm.*		*0-12.*	*0-10.*				*mm.*
6 a. m	758.95	ENE	3	7	Cu.-N.	ENE	T	
2 p. m	57.40	NE	4	8	N.	NE	M	5.2
May 7:								
6 a. m	53.96	NE	5	10	N.	NE	M	
10 a. m	53.72	NE	5	10	N.	NE	M	
Noon	52.69	NNE	5	10	N.	NNE	M	
2 p. m	51.06	NNE	5	10	N.	NNE	M	
4 p. m	50.79	NNE	4	10	N.	NNE	M	
6 p. m	49.50	NNE	5	10	N.	NNE	M	
8 p. m	48.91	NNE	5	10	N.	------	------	
10 p. m	48.86	NNE	4	10	N.	------	------	
Midnight	48.28	NNE	4	10	N.	------	------	75.2
May 8:								
6 a. m	46.46	N	5	10	N.	N	H	
8 a. m	47.74	NW	5	10	N.	NNW	H	
10 a. m	48.22	NW	4	10	N.	NW	M	
Noon	48.89	NW	4	10	N.	NW	M	
2 p. m	49.55	NW	5	10	N.	NW	H	
4 p. m	50.33	NW	4	10	N.	NW	M	
6 p. m	52.03	NW	4	10	N.	NW	M	24.6

Since the 9th the typhoon moved to NE, crossing the Loochoos on the 9th and 10th, and central Japan on the 11th. See the track of this typhoon on Plate II.

The telegrams concerning this typhoon sent by Manila Observatory to Tokio, Shanghai, Taihoku, Hongkong and Phulien are as follows:

May 2, 5 p. m.: Typhoon E of the Pelew Islands, moving W or WNW.
May 3, 9 a. m.: Typhoon near or over the Pelew Islands, moving WNW.
May 4, 4.30 p. m.: Typhoon NW of the Pelew Islands, moving W or WNW.
May 6, 9 a. m.: Typhoon E of southern Luzon, moving WNW or NW.
May 7, 9 a. m.: Typhoon E of Aparri, less than 300 miles distant, moving WNW or NW.
May 8, 9.30 a. m.: Typhoon ENE of Aparri, inclining northward.

From Hongkong Observatory the following typhoon warnings were received:

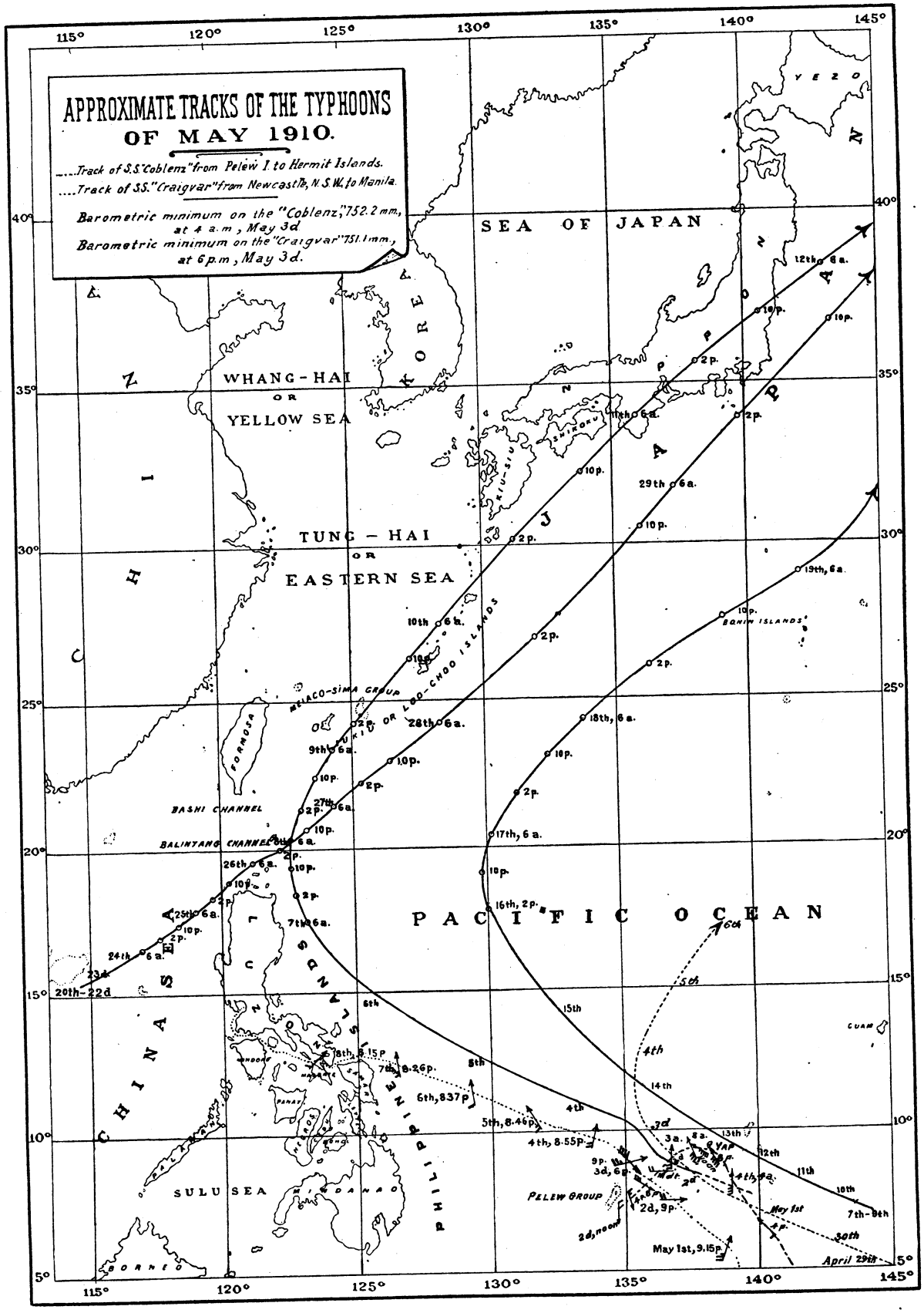
May 6, noon: Typhoon SE of Luzon, moving NW.
May 7, 11 a. m.: Typhoon NE of Luzon, moving NW.
May 8, 10.45 a. m.: Typhoon E of Balintang Channel, moving NNW.
May 9, 10.30 a. m.: Typhoon S. of Loochoos Islands, moving N.
May 10, 11 a. m.: Typhoon near Loochoos Islands, moving NE.

TYPHOON OF MAY 7 TO 19, 1910.

The track of this typhoon belongs to the same type as that of the preceding, with the only difference that it recurved farther from the Philippines. It had its origin in the Western Carolines, and moved first to WNW, then to NW and finally recurved during the afternoon and night of the 16th, when the vortex was situated in the neighborhood of 130° longitude E, to the east of northern Luzon and the Balintang Channel. From the 17th the typhoon moved NE; so that at 6 a. m. of the 19th it appeared near 142° longtitude E and 29° latitude N.

The following are some of the observations made at Yap where the barometer was as low as 748.41 millimeters at 3.50 a. m. of the 13th, and the backing winds showed the passing of the typhoon to the north of the station.

Plate II.


APPROXIMATE TRACKS OF THE TYPHOONS OF MAY 1910.
....Track of S.S."Coblenz" from Pelew I. to Hermit Islands.
....Track of S.S."Craigvar" from Newcastle, N.S.W. to Manila.
Barometric minimum on the "Coblenz", 752.2 mm, at 4 a.m., May 3d
Barometric minimum on the "Craigvar" 751.1 mm., at 6 p.m., May 3d.
SEA OF JAPAN
YEZO
NIPPON
WHANG-HAI OR YELLOW SEA
TUNG-HAI OR EASTERN SEA
CHINA
KIU-SIU
SHIKOKU
JAPAN
MELACO-SIMA GROUP
LOO-CHOO ISLANDS
BONIN ISLANDS
FORMOSA
BASHI CHANNEL
BALINTANG CHANNEL
PACIFIC OCEAN
PHILIPPINE ISLANDS
CHINA SEA
SULU SEA
BORNEO
MINDANAO
PANAY
GUAM
YAP
PELEW GROUP
12th, 6 a.
10th 6 a.
9th 6 a.
28th 6 a.
29th 6 a.
19th, 6 a.
18th, 6 a.
17th, 6 a.
16th, 2 p.
15th
14th
13th
12th
11th
10th
7th-9th
May 1st
30th
April 29th
26th 6 a.
25th 6 a.
24th 6 a.
23d
20th-22d
7th 6 a.
6th
5th
4th
3d
2d
1st
6th, 8.37 p.
5th, 8.46 p.
4th, 8.55 p.
3d, 6 p.
2d, 9 p.
2d, noon
May 1st, 9.15 p.
7th, 8.26 p.
8th, 9.15 p.
10 p.
2 p.
6 a.

METEOROLOGICAL OBSERVATIONS MADE AT YAP (WESTERN CAROLINES), MAY 9 TO 13, 1910.

Date and hour.	Pressure.	Wind.		Lower clouds.		Sea.		Weather.	Rainfall (daily total).	Remarks.
		Direction.	Force.	Form.	Direction.	State.	Direction.			
May 9:	*mm.*		*0-12.*						*mm.*	
6 a. m.	756.69	Calm	------	S.-Cu.	NE	S	---------	o	-------	
2 p. m.	55.65	NNE	2	Cu.	NE	C	N	o	--------	Converence of Ci. to the SE at 6 p. m.
May 10:										
6 a. m.	55.72	Calm	------	Cu.	NE	T	---------	o	-------	
2 p. m.	54.47	NbyE	1	Cu.	NE	C	NNE	c	0.8	
May 11:										
6 a. m.	55.29	NNW	1	Fr.-N.	NNE	S	---------	o	-------	
9 a. m.	55.22	NNW	1	Cu.	NbyE	L	N	c	-------	
2 p. m.	53.69	NbyW	1	Cu.-N.	---------	L	N	o	-------	
10 p. m.	53.93	NNW	2	Cu.-N.	---------	------	---------	o,d	24.6	Besides the sea from the N caused by the wind there has been observed a strong swell from the SE quadrant, viz, from a point almost opposite to the direction of the wind.
May 12:										
6 a. m.	52.41	NbyW	3	N.	---------	T	---------	o,r	-------	
10 a. m.	51.77	NbyW	2	Fr.-N.	N	L	N	o,r	-------	
2 p. m.	49.98	NW	1	Fr.-N.	N	------	---------	o,d	-------	The swell from the SE quadrant continues to be observed practically whole day.
6 p. m.	49.46	NNW	5	Fr.-N.	N	------	---------	o	-------	
10 p. m.	50.64	NNW	5	Fr.-N.	---------	------	---------	q	78.2	
May 13:										
3.50 a. m.	48.41	Calm	------	------	---------	------	---------	------	-------	
6 a. m.	48.51	WNW	6	Fr.-N.	NW	L	N	o	-------	
10 a. m.	50.31	WSW	3	Fr.-N.	WNW	------	---------	q	-------	At 9.24 a. m. gusts of wind force 7 to 9.
2 p. m.	49.21	WSW	6	Fr.-N.	SW	------	---------	q	-------	
4 p. m.	49.31	SW	5	Fr.-N.	WSW	------	---------	q	129.7	At 3.15 p. m. squalls from SW byS, force 8.

The following typhoon warnings were exchanged between Manila and Hongkong Observatories:

Manila.—May 12, 11.30 a. m.: Typhoon near or over the Western Carolines, moving W or WNW.
May 16, noon: Typhoon E of northern Luzon, more than 300 miles distant, moving WNW or NW.
May 17, 11.30 a. m.: Typhoon SSE of Naha (Loochoos Islands), inclining northward.
Hongkong.—May 17, noon: Typhoon S of Loochoos Islands, moving N.
May 18, noon: Typhoon E of Loochoos Islands, moving NE.

DEPRESSION OR TYPHOON OF MAY 22 TO 29, 1910.

Since the 21st we noticed in Manila some signs of a depression forming in the China Sea, although its existence was not announced by the Observatory until the 23d. In the ordinary weather notes of the 21st and 22d we made the following statements:

May 21, 11.20 a. m.: * * *. The atmospheric pressure is relatively low over the China Sea between Luzon and Indo China.

May 22, 3.30 p. m.: * * *. The atmospheric pressure is low over the China Sea between Luzon and Indo China.

On the 23d and 24th the existence and situation of this depression was wired to Hongkong and the other central observatories of the Far East thus:

May 23, 11 a. m.: Depression northern part China Sea.
May 24, 11.45 a. m.: Typhoon W of Luzon, more than 100 miles distant, developing.

Hongkong Observatory favored us with this warning on the 23d:

May 23, noon: Typhoon E of Paracels, direction unknown.

In the early morning of the 25th our stations on the western coast of Luzon gave clear indications of the approaching of the depression or typhoon, and so we did not doubt to affirm that it was moving northeastward. In fact, it crossed through Balintang Channel on the 26th, passed to the SE of the Loochoos on the morning of the 28th, and appeared not far from the eastern coast of Japan in the afternoon of the 29th.

The following typhoon warnings were exchanged between Manila and Hongkong Observatories:

Manila.—May 25, 11.45 a. m.: Typhoon W of northern Luzon, more than 100 miles distant, moving NE.
May 26, 10.40 a. m.: Typhoon near or over Balintang Channel, moving NNE or NE.
May 27, 9.25 a. m.: Typhoon E of southern Formosa, moving NE.
May 28, 11.30 a. m.: Typhoon SE of Naha (Loochoos Islands), moving NE.
Hongkong.—May 25, 12.30 p. m.: Typhoon NW of Luzon, moving N.
May 26, 12.30 p. m.: Typhoon near Balintang Channel, moving N.
May 27, 10.30 a. m.: Typhoon E of Formosa, moving NE.

We give here some of the observations made at Santo Domingo, Batanes Islands, while under the influence of this typhoon when it passed south and east of that station.

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO (BATANES ISLANDS), MAY 25 AND 26, 1910.

Date and hour.	Pressure.	Wind.		Cloudiness.	Lower clouds.		Rainfall (daily total).
		Direction.	Force.		Form.	Direction.	
May 25:	*mm.*		*0–12.*	*0–10.*			*mm.*
6 a. m	756.44	Calm		10	N.	E	
2 p. m	55.63	ESE	1	10	N.	ESE	76.1
May 26:							
6 a. m	53.59	SE	1	10	N.	SE	
10 a. m	52.50	SE	1	10	Fr.-N.	SE	
Noon	52.45	NE	1	8	N.	Variable	
2 p. m	51.91	NEbyN	1	8	N.	NEbyN	
4 p. m	51.61	N	1	10	N.	N	
6 p. m	52.44	NW	3	10	N.	NW	
8 p. m	53.60	NW	4	9	N.	NW	
10 p. m	54.39	WNW	4	7	N.	WNW	5.9

In Plate II our readers will find the track of this depression, of which we do not know, up to the present, whether it ever acquired any great development.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La media de la presión atmosférica de este mes resulta en todas las estaciones algo inferior á la media mensual de Mayo, 1909. La de Manila difiere de la normal de Mayo en —0.78 mm. Las mayores presiones se registraron en todas partes el 20 ó 21. Las menores presiones tuvieron lugar los días 6, 7 ú 8, excepto en la costa occidental del norte de Luzón donde fueron observadas el 25.

Salvas raras excepciones, la temperatura media mensual es también algo inferior á la del año próximo pasado. La de Manila se separa de la normal en —1.1° C. Los valores extremos registrados en el Observatorio Central fueron 34.4° C. y 21° C.

Precipitación acuosa.—La precipitación mensual ha sido generalmente mayor que la normal de este mes y que la de Mayo del año pasado. Como puede verse en la tabla de lluvia que acompaña el texto inglés, solo 16 estaciones dan este mes un total de lluvia menor que el de Mayo, 1909. La precipitación mensual de Manila supera á la normal de Mayo en 80.3 mm.

DEPRESIONES Y TIFONES.

Una sola depresión ó tifón cruzó este mes el Archipiélago á través del canal de Balintang en dirección al nordeste. Otro tifón pasó no lejos del nordeste de Luzón y de las Islas Batanes moviéndose al Norte y con tendencia á recurvar. Fuera de estos dos baguios ha habido en el Pacífico otros dos que influyeron muy poco ó nada en Filipinas, pero se sintieron, en cambio, bastante en las Carolinas Occidentales.

TIFONES DE 29 DE ABRIL Á 13 DE MAYO, 1910.

Si no tuviésemos en nuestro poder más que las observaciones de Yap, Carolinas Occidentales, y las de Filipinas, apenas dudaríamos en afirmar que no hubo en los primeros días de Mayo más que un solo tifón. Mas las observaciones hechas á bordo de los vapores *Coblenz* y *Craigvar* nos obligan á suponer dos tifones casi simultáneos en las Carolinas Occidentales, de los cuales el uno recurvó al NE no lejos de Yap, y el otro se acercó bastante á la parte más septentrional de Filipinas, viniendo á recurvar también al NE cuando demoraba el vórtice al E del canal de Balintang.

En una tabla que acompaña el texto inglés podrán ver nuestros lectores algunas de las observaciones hechas en Yap durante los primeros días de Mayo. Además, en la lámina II damos la ruta seguida por los vapores *Coblenz* y *Craigvar* juntamente con las mínimas barométricas y los vientos observados á bordo de los mismos.

En las observaciones de Yap se echará de ver que la mínima barométrica de la madrugada del día 3 fué ligeramente inferior á la mínima de la tarde anterior; y sin embargo, los vientos habían ido rolando el día 2 desde el NE hasta el SE, indicando estos últimos que el vórtice se hallaba ya á eso de 8 p. m. de dicho día al WSW de aquella estación. De este hecho y á la luz de las observaciones de los barcos poco ha mencionados parece poder deducirse con alguna probabilidad (1) que la tarde del día 2 pasó un baguio por el S y SW de Yap y por el NE y N del vapor *Coblenz* el cual se hubo de encontrar á la menor distancia del vórtice la madrugada del 3 cuando se observó la mínima barométrica con vientos del S (véase la posición del barco en aquella hora en la lámina II); (2) que otro baguio cruzó el día 3 por entre Yap y el vapor *Craigvar*, hallándose á la menor distancia de Yap por la madrugada y á la menor distancia del *Craigvar* á las 6 p. m. (véase la posición de este barco á 6 p. m. en la lámina II).

El primero de estos baguios parece que recurvó al N y NNE durante los días 3 y 4 viniendo á deshacerse probablemente el día 6 al W de las Islas Marianas.

El segundo baguio debió de moverse primero al WNW cuando pasaba por el Sur de Yap; pero hubo de inclinarse luego al N, pues sólo así nos podemos explicar cómo pudo observarse la mínima barométrica á bordo del *Craigvar con vientos del NW.* El día 4 volvió á inclinarse al W moviéndose próximamente al WNW y NW hasta el día 7, en que comenzó á moverse al N, verificando por fin una completa recurva al Este del canal de Balintang.

En el texto inglés verán nuestros lectores las observaciones hechas en la estación de Santo Domingo, Islas Batanes, los días 6, 7 y 8. Desde el día 9 el baguio se movió al NE, atravesando del 9 al 10 las Islas Liukiu, y el día 11 la parte central del Japón. Véase la trayectoria de este baguio en la lámina II.

Los telegramas que sobre este baguio envió el Observatorio de Manila á Tokio, Shanghai, Taihoku, Hongkong y Phulien son como siguen:

Día 2, 5 p. m.: Tifón al E de las Islas Palaos, moviéndose al W ó WNW.
Día 3, 9 a. m.: Tifón en, ó cerca de, las Islas Palaos, moviéndose al WNW.
Día 4, 4.30 p. m.: Tifón al NW de las Islas Palaos, moviéndose al W ó WNW.
Día 6, 9 a. m.: Tifón al E del Sur de Luzón, moviéndose al WNW ó NW.
Día 7, 9 a. m.: Tifón al E de Aparri, distancia menor de 300 millas, moviéndose al WNW ó NW.
Día 8, 9.30 a. m.: Tifón al ENE de Aparri, inclinándose al Norte.

Del Observatorio de Hongkong se recibieron á la vez estos avisos de tifón

Día 6, mediodía: Tifón al SE de Luzón, moviéndose al NW.
Día 7, 11 a. m.: Tifón al NE de Luzón, moviéndose al NW.
Día 8, 10.45 a. m.: Tifón al E del canal de Balintang, moviéndose al NNW.
Día 9, 10.30 a. m. Tifón al S de Loochoos, moviéndose al N.
Día 10, 11 a. m.: Tifón cerca de Loochoos, moviéndose al NE.

TIFÓN DEL 7 AL 19 DE MAYO, 1910.

La trayectoria de este baguio pertenece al mismo tipo que la del anterior, con la sola diferencia de haber recurvado mucho más lejos de Filipinas. Formado del 7 al 10 en las Carolinas Occidentales, se movió al WNW primero y al NW después y recurvó durante la tarde y noche del 16 cuando demoraba el vórtice en los alrededores de 130° long. E al Este del norte de Luzón y del canal de Balintang. Desde el 17 se movió al NE; de suerte que á 6 a. m. del 19 demoraba el vórtice en los alrededores de 142° long. E y 29° lat. N. En una tabla que acompaña el texto inglés damos algunas de las observaciones hechas en Yap, donde bajó el barómetro hasta 748.41 mm. á 3.50 a. m. del 13, indicando los vientos el paso del baguio por el N, y no muy lejos, de aquella estación.

Entre los Observatorios de Hongkong y Manila se cruzaron estos telegramas referentes á este tifón:

Manila.—Día 12, 11.30 a. m.: Tifón en, ó cerca de, las Carolinas Occidentales, moviéndose al W ó WNW.
Día 16, mediodía: Tifón al E del norte de Luzón, distancia mayor de 300 millas, moviéndose al WNW ó NW.
Día 17, 11.30 a. m.: Tifón al SSE de Naha (Islas Liukiu), inclinándose al norte.
Hongkong.—Día 17, mediodía: Tifón al S. de Loochoos, moviéndose al N.
Día 18, mediodía: Tifón al E de Loochoos, moviéndose al NE.

DEPRESIÓN Ó TIFÓN DE 22 Á 29 DE MAYO, 1910.

Desde el día 21 empezaron á notarse en Manila indicios de una depresión en el mar de China, la cual sin embargo no fué anunciada por el Observatorio hasta el 23. En las notas ordinarias del 21 y 22 se decía lo siguiente:

Día 21, 11.20 a. m.: * * *. La presión atmosférica está relativamente baja en el Mar de China entre Luzón é Indochina.
Día 22, 3.30 p. m.: * * *. La presión atmosférica está baja en el Mar de China entre Luzón é Indochina.

Los días 23 y 24 se enviaron á Hongkong y demás Observatorios del Extremo Oriente los siguientes telegramas:

Día 23, 11 a. m.: Depresión en la parte norte del Mar de China.
Día 24, 11.45 a. m.: Tifón al W de Luzón, distancia mayor de 100 millas, desarrollándose.

El Observatorio de Hongkong nos favoreció el día 23 con este aviso de tifón:

Día 23, mediodía: Tifón al E de Paracels, dirección desconocida.

El día 25 por la madrugada nuestras estaciones de la costa occidental de Luzón indicaban claramente que el tifón se acercaba á la Isla y así no dudamos en afirmar que se dirigía al NE,

como así fué en realidad. La depresión ó tifón cruzó el canal de Balintang el día 26, pasó por el SE de Liukiu la mañana del 28 y se halló á la menor distancia de la costa oriental del Japón la tarde del 29.

Los siguientes avisos de tifón se cambiaron entre Hongkong y Manila desde el día 25.

Manila.—Día 25, 11.45 a. m.: Tifón al W del norte de Luzón, distancia mayor de 100 millas, moviéndose al NE.

Día 26, 10.40 a. m.: Tifón en el, ó cerca del, canal de Balintang, moviéndose al NNE ó NE.

Día 27, 9.25 a. m.: Tifón al E del sur de Formosa, moviéndose al NE.

Día 28, 11.30 a. m.: Tifón al SE de Naha (Islas Liukiu), moviéndose al NE.

Hongkong.—Día 25, 12.30 p. m.: Tifón al NW de Luzón, moviéndose al N.

Día 26, 12.30 p. m.: Tifón cerca del canal de Balintang, moviéndose al N.

Día 27, 10.30 a. m.: Tifón al E de Formosa, moviéndose al NE.

En el texto inglés van las observaciones hechas en Santo Domingo, Islas Batanes, durante el paso del baguio por el S y E de aquella estación.

En la lámina II podrán ver nuestros lectores la trayectoria de esta depresión ó tifón que no nos consta hasta el presente llegase á adquirir gran desarrollo ó intensidad.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	758.94	27.1	34.1	22.5	28.6	29.7	29.1	29.2	28.5	27.8	74.1	19.6	4.6	3.8
2	58.22	26.9	33.5	22.3	28.6	30.4	29.2	29.5	28.3	27.9	77.5	20.4	3.6	2.9
3	58.07	27.3	33.7	23	29	30.7	29.3	29.6	28.4	28.1	76.2	20.4	4.6	3.7
4	58.32	27.3	33.5	22.4	29	30.8	29.3	29.6	28.4	28	74.2	19.7	5.1	4
5	57.84	27.8	34.4	23	29.1	31.2	29.3	29.7	28.4	27.9	73.5	20.2	4.8	3.7
6	56.10	27.7	32.7	23.1	29.4	31.3	29.6	29.8	28.4	27.9	77.2	21.4	5	3.4
7	54.71	28.8	32	25.1	30	31.6	29.8	30.1	28.5	28	77	22.6	4.7	3.7
8	55.47	28.2	33.6	23	29.7	31.3	29.9	30	28.5	27.9	77.9	21.9	5.7	4.2
9	56.14	28	32.8	23.2	29.7	31.1	29.8	30.2	28.5	28	76	21.1	5.5	4
10	56.63	28.4	33.5	23.5	30.1	32.3	30.2	30.5	28.6	28	72	20.4	6	4.7
11	57.45	28.5	33.5	24.7	30.7	32	30.3	30.6	28.6	28	75.2	21.4	4.1	3.4
12	57.66	28	34.4	24.4	30.3	32.2	30.4	30.6	28.6	28	78.3	21.7	3.8	3.2
13	57.26	28.6	34	24.5	30.2	31.6	30.5	30.6	28.7	28	73.4	21.1	4.8	3.7
14	57.30	28.7	34.2	25.3	30.2	32.3	30.5	31	28.7	28.1	74.9	21.7	4.2	3.1
15	57.64	28.6	34.1	24.2	30.6	32.3	30.7	31	28.8	28	73	21.1	4.6	4.1
16	58.01	27.7	32	24.7	30.5	31.9	30.7	30.9	28.8	28	79.7	22	3.7	2.8
17	57.80	28.4	32.4	24.3	30.5	32.3	30.7	31	28.8	28	79.2	22.6	4.2	3.7
18	58.36	27.7	32.5	21	30	31.7	30.7	31	28.9	28.1	80.2	22	4.6	3.4
19	58.61	27.7	33.4	23.8	30.5	32.1	30.6	31	29	28	79.4	21.6	4	3.4
20	59.62	27.1	32	24	30.2	32.1	30.6	31	29	28	82.8	21.9	3	2.5
21	59.44	27.1	33.3	23.7	30.3	31.7	30.6	30.9	29	28	82.7	21.9	2.5	1.9
22	58.67	27.3	34.4	23.7	29.9	31.7	30.4	30.7	29	28.1	81	21.6	5.8	4.8
23	57.32	27.2	32.8	24.1	30.3	31.8	30.7	30.8	29.1	28.1	83.9	22.4	2	2.2
24	56.71	26.4	31.5	23.7	30	31	30.5	30.5	29	28	86.6	22.1	1.7	1.8
25	56.68	26.2	30.2	24	29.2	29.7	30.1	30.2	29	28	85.3	21.5	1.8	2
26	56.94	26.1	27.3	24.5	28.7	28.6	29.8	29.8	29	28	88.2	22.2	.6	1.7
27	56.76	25.8	29.3	23.8	28.2	28.3	29.5	29.3	29	28.1	88.7	21.9	.6	1.1
28	57.21	25.1	29.2	23.6	28.1	28.1	29	28.9	29	28.1	93.1	22	.6	2.1
29	58.30	26.1	31.3	23	27.7	28.9	28.8	28.9	29	28.2	87.6	21.9	1.6	1.8
30	58.54	26.7	33.1	23.1	28	29.6	28.9	29.1	29	28.5	84.1	21.6	2.6	2.4
31	58.34	26.7	33	23.2	29.1	30.8	29	29.2	29	28.2	84	21.7	2.5	1.9
Mean	757.58	27.4	32.6	23.6	29.5	31	30	30.2	28.8	28	79.9	21.5	3.6	3.1
Total													112.9	95.1
Departure from normal	—0.78	—1.1	—0.8	—0.3							+3.7	—0.3		

Date.	Wind.				Clouds.			Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction.				
						Upper.	Lower.			
		Km.	*Km.*		*0–10.*			*h. m.*	*mm.*	
1	E quad.	178	14	WNW	4.7	Ci.-S. SbyW	Cu. ESE	9 10		≡° a. d° p.
2	Variable	169	19	WNW	4.4	Ci.	Cu. ESE	7 55		≡ a. ⊤° d° p.
3	SE quad.	185.5	15	W	4.8	Ci.-S. SE	Cu. EbyS	9 20		⌈◪ p.
4	SE quad.	144.5	18	WNW	4.2	Ci.	Cu. EbyN	10 45		☊ a. ⌒ ≡° p.
5	E quad.	148.5	14.5	NNE	7.8	Ci.-S. SE	Cu. NE	8 05		≡ a. ◟° p.
6	WSW	300.5	38	SWbyW	8.2	Ci.-S. SE	Cu. W	6 10		≡° a. ⌈◪ p.
7	SW	533.5	38	SWbyW	7.7	Ci.-S.	Cu.	5 35		⌈◪ p.
8	W quad.	292	23	SW	9.2	Ci.-S.	Cu.	6 40		≡ a. ○ p.
9	WSW	261	23	SW	7.6	Ci. SW	Cu. NNW	8 40		
10	SW quad.	245.5	21.5	W	5.3	Ci. NE	Cu.	10 00		☊ a.
11	Variable	126	13	WSW	6.4	A.-Cu. ESE	Cu.	8 15	0.8	☊ ≡° p a.
12	W quad.	167.5	20	WSW	7.2	Ci.-S.	Cu. ESE	8 35		≡a. ⌈◪ p.
13	W quad.	184	14.5	NW	5.2	Ci.	Cu. E	9 30		≡° ⌈◪° ◟° p.
14	W, NE	138	19	N	7	Ci.-S.	Cu. N	8 05		☊ a. ⌈◪ p.
15	W quad.	174.5	15	WbyN	4.8	Ci.	Cu. NE	10 00	6.3	≡° d ⌒² a. ◟ ● p.
16	WSW	255	27	WSW	7.3	Ci.-S.	Cu.	7 15	4.2	● a. ⌈◪° p.
17	WSW	274.5	26	WSW	4.2	Ci.-S.	Cu. NNW	10 00		☊ a.
18	WSW	318	28	SWbyW	5.5	Ci.-S. NE	Cu. NNW	9 50	50.8	●² ≡° a. ⌈◪° p.
19	WSW	211	26.5	SWbyW	4.9	Ci.-S. NE	Cu. SE	10 05	2.4	☊ ≡ a. ● p.
20	SW quad.	162	13	SW	8.9	Ci.-S. WNW	Cu. SW	7 40	7.8	⌈◪ a. ⌒ ⌈◪° p. ●
21	SE	113	18	S	8.2	Ci.-S. W	Cu. SE	6 05		☊ ≡° ◯° a. ⌈◪ p.
22	E	148.5	17.5	SW	7.4	Ci.-S. NE	Cu. EbyS	7 40	2	≡° a. ⌈◪ ● p.
23	E	143.5	13	SSE	8.8	Ci.-S.	Cu. SbyE	5 20	5.6	● ⌈◪ p.
24	SE	208.5	31	SE	9.8	Ci.-S.	Cu.-N. SW	1 40	4.9	≡° ◯° a. ● ⌈◪°
25	SE	273.5	23	S	10	Ci.-S.	Fr.-N. SSW	0 45	7.3	≡ a. ● a. p.
26	S	370.5	32	SW	10		Fr.-N. SWbyW	0 00	32.4	● a. p.
27	SSW	184.5	16.5	SW	9.2	Ci.-S.	Cu.-N. WSW	0 00	21.9	⌒ p. ● a. p.
28	W quad.	224.5	28	W	9.5	Ci.-S.	Cu.-N. SW	0 15	43.7	≡ ⌒° a. ● ⌈◪
29	ESE	146	28	WSW	8.7	Ci.-S.	Cu.	2 30	1.3	≡° ⊤° ◯ a. ● p.
30	SE quad.	68	9	SE	7.1	Ci.-S.	Cu.	7 05	1.1	≡ a. ⌒° ⌈◪ ● p.
31	Variable.	68.5	15	SbyW	8.8	Ci.	Cu.	6 00		≡° a. ⊤ ●° p.
Mean		206.9	21.2		7.2			6 44		
Total								208 55	192.5	
Departure from normal		—22.5			+ 1.5			—23 53	+80.3	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3]			Relative humidity (mean).[3]	Wind.[3]		Clouds.[3]			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.93	27.1	32.3	23	82.4	N quad.	1.8	8.2	Ci.-S.	Cu.-N. E	0.5	d° ⊤ ↘ p.
2	57.42	27.3	31.2	23.6	81.6	N quad.	1.6	9.6	Ci.-S.	Cu. E	.6	⌐◪² d a. ↘ p.
3	57.11	27.1	32.3	23.6	81	SE	1.8	8.6	Ci.-S.	Cu.-N. E, NE	5.6	d a. p. ↘ p.
4	57.11	27	29.8	24	82.6	SE	1.4	9.6	Ci.-S.	Cu.-N. E	6.4	↘ ⌐◪ p.
5	56.54	27.9	33.5	23.3	81	Variable	1.6	8.8	Ci.-S. NW	Cu.-N. E	------	
6	56.06	28.4	32.5	25.7	76.6	SSW	2.2	8.6	Ci.-S.	Cu. SW	------	
7	56.32	28.5	33	26.1	79	SE	3.2	7.4	Ci.-S. NNE	Cu. SW	------	
8	56.23	28.6	33.7	25.9	77	S quad.	2.6	7.4	Ci.-S. NE	Cu.-N. SW	------	↘ p.
9	56.22	28.5	34.4	25.7	80.6	NNE, SE	1.8	7.8	Ci.-S.	Cu.-N. NE	------	d° a.
10	56.13	27.7	32.2	24.8	81.6	SE	1.6	8	Ci.-S.	Cu.-N. NE, E	------	⊤ ↘ p.
11	56.58	27.8	32.8	23.1	81	SE	1.2	7.4	Ci.-S.	Cu.-N. E, NNW	.5	d° ↘ p.
12	56.91	28	32.5	24.8	80.2	SE	1.6	7.4	Ci.-S.	Cu. NE	------	
13	56.44	28.2	32.5	23.7	76.8	SE	1.8	7.2	Ci.-S.	Cu. NE, NW	------	
14	56.35	28.2	33	23.5	76.8	SE	1.6	6	Ci.-S.	Cu., Cu.-N. NW	.5	d° p.
15	57.04	28.3	33.4	24.8	79.4	SE	2	8.6	Ci.-S. E	Cu. NW	------	
16	57.71	28.4	34.3	24.2	77	S quad.	1.4	7	Ci.-S. SW	Cu. NW	------	
17	57.68	29	33.5	25.5	73.5	SE	2.2	7.2	Ci.-S.	Cu. NE, SSW	------	
18	57.81	29	33.9	24.3	72.2	SE	1.8	9.2	Ci.-S.	Cu.-N. Variable	------	↘ p.
19	58.14	29	35.2	25.5	75	SE	1.4	8.2	Ci.-S.	Cu.-N. SSE, SE	------	⌿ p.
20	59.02	28.3	32.3	25	79.2	SE	1.8	9.2	Ci.-S.	Cu.-N. Variable	71.1	⊤ a. p. ↘ ●² p.
21	58.89	27.2	30.2	24.3	82.6	SE	1.4	8	Ci.-S.	Cu.-N. SE	1.5	⌐◪ ● ↘ p.
22	58.24	27.6	33.5	23.5	78.2	SE, WNW	1.6	8	Ci.-S.	Cu.-N. SE, NW	------	⊤ a.
23	57.69	27.9	33.1	23.3	79.8	SE	1.8	8.6	Ci.-S. SW	Cu. SE, E	------	
24	56.99	28.4	33.2	25.2	77.1	SE	1.4	9.8	Ci.-S.	Cu.-N. SE, NW	------	
25	57.47	28.2	32.7	24.6	78	SE	1.6	9.8	Ci.-S.	Cu.-N. SW	------	
26	57.67	28.5	34.2	25.6	76.4	S quad.	2.4	9	Ci.-S. E	Cu. NW	------	
27	56.59	28.9	35.4	24.9	77.2	SE	2	7.8	Ci.-S. NE	Cu.-N. NNE	------	↘ p.
28	56.70	29.1	34.9	25	75	SE	1.6	7.2	Ci.-S. NW	Cu.-N. SE	------	↘ p.
29	58.25	27.8	34.3	22.9	77.4	SE	1.4	9	Ci.-S.	Cu.-N. SSE, SE	7.9	⌐◪ ↘ ● ⌿° a.
30	58.35	27.8	31.2	24.8	79	NNE, SE	1.2	9.6	Ci.-S.	Cu.-N.	3.6	↘ p.
31	57.53	27.4	33.5	22.7	81.2	SE	1.2	8	Ci.-S.	Cu.-N. E	.3	● d° a.
Mean	757.26	28.1	33	24.4	78.6	----------	1.7	8.3	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	98.5	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.54	26.1	29.6	22.9	89.2	NNW, ENE	0.2	6	A.-Cu., Ci.-S. N	Cu.-N. NE	13.5	● a. Ω² p.
2	57.66	26.6	31.1	23.2	88	NW	.5	6.7	A.-Cu. N	Cu., S.-Cu. NE	------	≡ a. ↘ p. Ω² a. p.
3	57.54	26.6	29.5	23.5	89.2	NW, NE	.3	6.5	Ci.-S. N	Cu. NE	11.2	≡ Ω² a. ↘² p.
4	57.60	27	29.8	23.5	87.2	NW	.5	7.3	Ci.-S. NE	Cu. N	4.3	Ω² ● a. p° ↘² p.
5	56.68	26.9	31.3	23.1	83.5	WbyN, WbyS	.5	8	Ci.-S. E	Cu. WNW	------	Ω² ● a.
6	56.38	27.8	32.5	24.6	78	SW quad.	.5	7.2	Ci.-S. NE	Cu.	------	Ω² a. p. ↘° p.
7	56.95	27.9	33.3	24.1	79	N, WbyS	.3	3.3	Ci.-S. NE	Fr.-Cu. SW	------	≡ a. Ω² a. p.
8	56.68	28.2	32.8	23.8	77.7	SW quad.	.5	2.2	Ci.-S.	Cu. SW	------	≡ Ω² a. Ω² ↘ p.
9	56.66	27.6	32.9	24.1	83	WbyS, WSW	.5	4.5	Ci.-S. NE	Cu. SW	------	≡ Ω² a. ⊤ p. ↘
10	56.82	27.6	30.9	24	83.5	S, W	.2	3.5	Ci.-S. NE	Cu.-N.	------	≡ Ω² a. ↘² a. p.
11	57.52	27.2	31.5	23.7	85.5	EbyN	.2	3.7	Ci.-S. NE	S.-Cu. S	------	≡° Ω² a. ↘° p.
12	57.59	26.7	32.2	23.3	87.2	Variable	.5	3.2	Ci. SE	Cu. E	------	≡° Ω² a.
13	57.14	26.6	31.5	22.9	84.5	ESE, NW	.3	4.8	Ci. N	Cu. NE	------	≡° Ω² ↘° a.
14	57.05	26.8	30.6	23.7	85.9	ENE	.3	4.3	Ci. N	Cu. NE	------	≡° Ω² ↘ a.
15	57.64	27	31.4	23.9	81.8	NW, WNW	.3	6.7	Ci. N	Cu. NE	------	≡° Ω² a.
16	58.60	27.1	33.1	22.1	80	WNW, W	.5	6.2	Ci.-S. NE	Cu. SW	------	≡° Ω² a.
17	58.60	27.8	33.4	22.8	80.6	Variable	.7	5.2	Ci. NE	Variable SW	------	≡° Ω² a. ↘ p.
18	58.63	27.7	32.6	23.1	80.7	NW, W	.5	4.3	Ci.-S. N	Cu., Cu.-N. SW	------	≡° Ω² a. ↘ ⊤° p.
19	59.18	27.4	31.6	23.4	83.2	WSW	.2	5	Ci. N	Cu.-N. SW	------	≡° Ω² a. ⌐◪ p. ↘²
20	-------	------	------	------	------	----------	-------	-------	----------	----------	------	
21	59.45	------	33.6	23.5	------	----------	-------	-------	----------	----------	------	Ω a. ⌣ p.
22	-------	------	32.1	22.7	------	----------	-------	-------	----------	----------	------	Ω a. ⊤ p.
23	-------	------	32.8	24.5	------	----------	-------	-------	----------	----------	------	⊕ ○ ⌣ Ω p.
24	57.80	------	32	23.7	------	----------	-------	-------	----------	----------	------	⊤ a. ⌐◪ p.
25	58.26	------	32.1	23.5	------	----------	-------	-------	----------	----------	------	Ω ≡° a. ↘ p.
26	58.42	------	32.4	23.3	------	----------	-------	-------	----------	----------	------	⌒ d° a.
27	57.42	------	34.2	23.2	------	----------	-------	-------	----------	----------	------	
28	57.51	------	32.2	22.5	------	----------	-------	-------	----------	----------	------	
29	58.60	------	34.1	24.5	------	----------	-------	-------	----------	----------	------	
30	58.74	------	30.1	23.9	------	----------	-------	-------	----------	----------	8.9	d ● a. d p.
31	58	------	32.6	23.8	------	----------	-------	-------	----------	----------	------	
Mean	757.77	27.2	32	23.5	83.6	----------	.4	5.2	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	37.9	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.41	27.6	30.5	24.9	70.7	NE quad.	10.4	3.3	Ci.	Cu. E, ENE	------	☊ a. ⌐◪ ◟ p.
2	57.59	27.4	30.8	24.6	72.3	E quad.	7.6	4.8	Ci., Ci.-S.	Cu. ENE	0.5	☊ a. ⌐◪ ◟ a. p.
3	57.49	27.1	30.6	23.9	74.2	Variable	6	5.5	Ci., Ci.-S.	Cu.,Cu.-N. NE quad.	------	☊ d a. ┬ ◟ p.
4	57.39	26.9	30.7	23.6	75.3	E quad.	10	6.5	Ci., Ci.-S.	Cu. NE	2.6	≡° ☊ a. ⌐◪ ●° p.
5	56.75	27.4	31.3	23.5	71.3	ENE, SSW	6.3	7.3	Ci.-S. E	Cu. NE quad.	------	☊ a. ○ a. p.
6	56.47	27.8	31.5	24	69.5	SW	8.8	6.7	Ci.-S. E	Cu. Variable.	------	☊ a.
7	56.65	28.2	31.5	25	70.3	SW	9.8	3.7	Ci.	Cu. SW	------	☊ a.
8	56.41	27.8	31.5	23.9	71.5	SW quad.	8.7	3.5	Ci.	Cu. WSW	------	≡° ☊ a. ⌐◪ p.
9	56.44	27.5	31.5	24.5	73.8	Variable	6.1	5.3	Ci.-S.	Cu. WSW	.8	☊ a. ⌐◪ ●° p.
10	56.67	27.7	31	24	73.5	SE	6.5	4.7	Ci.-S.,Ci.	Cu. NE quad.	------	☊ a. ⌐◪ ◟ a. p.
11	57.24	27.9	31.7	24.6	73.7	E, SSE	5.3	4.8	Ci.	Cu.,S.-Cu. ENE, NE	3.8	≡° ☊ a. ⌐◪ a. p.
12	57.47	28	32	24.9	72.3	E	7.2	4.3	Ci.	Cu.,Cu.-N NE quad.	------	≡° ☊ ● a.
13	57.02	27.8	31.5	24	73	Variable	7	2.8	Ci.	Cu. NE	------	≡° ☊ a. ⌐◪ p.
14	56.93	27.4	31.5	22.9	70.2	E	7.2	3.2	Ci.	Cu. NE	------	☊ a. ◟ p.
15	57.45	27.5	30.9	23.9	70.8	E	8.6	3	Ci.	Cu. NE	1	≡° ☊ a. ●° p.
16	58.17	27.9	32.1	23.8	70.6	SW quad.	8.1	3.8	Ci., Ci.-S.	Cu. NE	------	≡° ☊ a.
17	58.26	28	32.5	23.9	71	SW quad.	---	3.3	Ci.	Cu. SW	------	≡° ☊ ◟ a. ∞ p.
18	58.51	28.3	33	24.5	68.7	SW quad.	5.7	5.3	Ci.-S.	Cu. SW quad.	------	☊ a. ⌐◪ ◡ p. ◟
19	58.87	27.7	32.4	24.6	73.4	S	5.5	5.3	Ci.-S.	Cu.,Cu.-N. ENE	------	☊ ○ a. ┬ p. ◟
20	59.92	26.3	31	24	76.2	E, SE	5.8	6.8	Ci.-S.	Cu.,Cu.-N. ENE	5.3	☊ a. ● ◡² p. ⌐◪
21	59.43	27.4	31.5	23.4	72.3	E	6.7	4.7	Ci.	Cu. ENE	7.1	☊ a. ⌐◪ p. ◟ a. p.
22	58.68	27.9	31.5	24.5	69.6	E	7.9	4.5	A.-Cu. E	Cu. NE, ENE	18.3	≡° ● a. ┬ ◟ a. p.
23	58.01	26.9	31.4	23.5	73.4	Variable	5.7	5.7	Ci.,Ci.-S.	cu.,cu.-N. E quad.	38.4	● a. ◟ ●² p. ┬
24	57.56	27.3	30.9	24.1	70.6	SW quad.	6.2	7	Ci.-S.	Cu. SSW	------	◡ ○ a. p. ⌐◪ p.
25	58.22	27.6	31.1	24.5	67.7	SW, SSW	6.3	6.3	Ci.-S. ENE	Cu. SSW	------	☊ a. ⌐◪ ◡ p.
26	58.24	27.9	31	25	66.8	SW, SSW	7.8	6.3	Ci.-S.	Cu. SW	------	☊ ◟ ○ a.
27	57.29	27.9	32.7	23.9	65.3	SW quad.	---	2.8	Ci.	Cu. SW	------	☊ a. ⌐◪ p.
28	57.42	28.6	32.3	25	65.6	S	6.7	3.8	Ci.	Cu. SSW	43.2	≡° ☊ a. ⌐◪ p.
29	58.82	26.8	31	21.4	72.1	Calm.	5	8	Ci.-S.	Cu.	17.3	●² ┬² ◟² ○ a. ◟ p.
30	58.75	27.2	31	23.7	71.3	Variable	7.4	6.7	Ci.,Ci.-S.	Cu.-N. NE	------	● ⊽ a. ⌐◪ p.
31	58.09	27.2	29.6	24.6	71.3	E	5.7	4.8	Ci.,Ci.-S.	Cu. ENE	.8	⌐◪ ◟ a. p. ●° p.
Mean	757.76	27.6	31.4	24.1	71.2	----------	7.1	5	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	139.1	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.50	28.4	33.5	24.9	71.7	NE quad.	13.4	6.2	Ci.	Cu.	0.5	◟ ● p.
2	58.04	27.8	33.1	24.3	75.5	N	8.4	6.7	Ci.-S. NE	Cu.	------	┬ ◟ p.
3	57.89	27.5	32.1	23.5	77.3	NE, N	8.8	6.7	Ci.-S. ENE	Cu.	------	☊ a. ◟ p.
4	57.86	27.9	32.6	24.5	72.6	NE quad.	11.6	5.5	Ci.	Cu. N	2.8	● a. ◟ p.
5	57.40	28	33.5	24.3	72.3	NE quad.	7.9	6	Ci.-S. E	Cu. NNE	------	○ a. ◟ p.
6	56.93	27.9	32.5	23	75.8	SW	14.8	6.2	Ci.	Cu.	------	◟ p.
7	56.88	28.8	31.7	27.6	76.8	SW	23	6.5	Ci.	Cu. SW	------	◟ p.
8	56.67	28.5	31.9	26	79.5	SW	19.9	3.7	Ci.	Cu. SW	------	
9	56.70	27.5	31	23	79	SW	12	6.5	Ci.	Cu.	------	◟ a. p. ┬ p.
10	57.02	27.3	31	24.9	79.7	N, SW	7.5	5.3	Ci.	Cu.	------	┬ a. p. d ◟ p.
11	57.54	27.5	32.9	23.5	79.2	S	5.2	5.2	Ci., Ci.-S.	Cu.	9.4	☊² a. ┬ ● p.
12	57.65	27.6	33.4	23.8	78.3	E, WSW	4.9	5.5	A.-Cu. N, E	Cu.	------	
13	57.40	27.5	33.5	22.8	75.3	E	6.4	4	Ci.	Cu.	------	⌐◪ d ◟ p.
14	57.28	28.1	33.3	23.5	72.2	E	7.2	3.7	Ci.	Cu. N	------	
15	57.96	27.5	33.3	22	73.6	SW	6.1	4	Ci.	Cu.	------	☊ a.
16	58.66	28	31.5	23.4	75.7	SW	13.1	5.7	Ci.-S. E	Cu.	------	┬ ◟ p.
17	58.74	27.9	31.6	23.4	76.2	SW	13.8	5	Ci.	Cu. WSW	------	◟ a. p.
18	58.94	27.6	31.6	24.3	77.3	SW	11.3	6.7	Ci.	Cu.	------	☊ a. ◟ ⊽ p.
19	59.27	27.5	32	23.3	77.2	SW	9.4	6.2	Ci.-S.	Cu.	------	☊ ○ a. ⌐◪ p.
20	60.10	27.6	32	24.4	76.9	SW	7	8.5	Ci.-S.	Cu.	.8	⌐◪ ● p.
21	59.75	27.6	32.5	23.8	76	SW	6.6	7	A.-Cu. E	Cu.	------	┬ ⌐◪ ◟ p.
22	58.98	27.1	32.4	22.4	79.3	NE, SW	5.3	7.5	Ci.-S. E	Cu.	59.4	◟ ⌐◪ a. p.
23	58.20	26.5	30.8	23.4	82.2	SW, W	8.2	8.7	Ci.-S.	Cu.	22.1	⌐◪ a. p.
24	57.85	26.8	30.4	24.2	86.2	SW	---	9.3	Ci.-S.	Cu.-N. SW	16.5	◟ a. ⌐◪ a. p. ● p.
25	58.44	26.4	30.5	23.6	88.2	SW	---	9.5	Ci.-S.	Cu.-N.	23.4	● ◟ p.
26	58.26	27.2	29.8	23.4	85.3	SW	13	9.2	A.-Cu. E	Cu.-N. SW	21.9	◠ a. ● a. p.
27	57.50	28	30.5	24.9	80.2	SW	13.7	7.3	Ci.	Cu.	40.6	d a. ● ◟ p.
28	57.63	28	30.6	23.9	80.5	SW	13.8	8.2	Ci.-S.	Cu. SW	------	◟ p.
29	58.55	27.5	30.4	23.9	82.8	NW, SW	7	8.3	Ci -S.	Cu.	------	☊ a. ◟ p.
30	58.78	27.2	33	22.4	81.7	SW	5	8.3	Ci.-S.	Cu.	55.9	☊ a. ⌐◪ ● ◟ p.
31	58.23	26.2	32	23.4	85	SW	6.5	8	Ci.	Cu.,Cu.-N.	18.6	⌐◪ d ● ◟ p.
Mean	758.05	27.6	32	23.9	78.4	----------	10	6.6	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	271.9	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.65	25.7	30.3	22.1	87.5	NE quad.	4.7	6.8	Ci.	Cu. E, ENE	10.2	☊ a. ⌐◪ d° ● ◟ p.
2	57.86	25.7	30.4	22	87.5	Variable	3.5	7.5	A.-Cu. E	Cu.-N.	3.6	☊ a. ● p. ◟ p. ⌐◪
3	57.78	24.6	30.4	21.7	88.7	Variable	3.7	6.8	Ci. W	Cu.-N. NE	14.5	☊° a. ● ┬ ◟ p. ⌐◪
4	57.62	25.7	32.8	21.6	84.8	N quad.	4	6.5	Ci.-S. SbyW	Cu.-N. NE	2	☊ a. ┬ p. ⌐◪ ◟ p.
5	56.89	25.9	31.5	20.6	80.8	N quad.	4.6	9.2	Ci. SE	Cu.-N. NbyE, N	1.3	☊ a. ◟ p.
6	56.50	26.9	31.2	21.4	79.8	W quad.	4.3	9.2	Ci.-S.	Cu.-N. W, WSW	------	d a. ◟ p.
7	56.89	27.6	32	22.3	81.2	SSE	4.8	7.7	Ci.	Cu. SW	------	◟ p.
8	56.66	27.4	32	23.8	81.2	SE quad.	3.1	4.8	Ci.	Cu.-N. SW, S	------	◟ p.
9	56.70	26.2	31	22.9	86.4	SSE	3.1	6.7	A.-Cu. SE	Cu.-N.	------	┬ ◟ p.
10	56.97	25.6	30.7	21.9	87.4	Variable	3.6	6.2	Ci. SE	Cu.-N. NE	4.3	☊ a. ┬ ⌐◪ ● ◟ ² p.
11	57.47	26	31.7	22	84.5	N quad.	3.6	5	A.-Cu. NE	Cu.-N.	12.7	☊ a. ⌐◪ ● ☋ ◟ p.
12	57.64	26.3	31.1	21.1	80.3	Variable	4.2	5.7	Ci. E, ENE	Cu.-N. NNE	------	☊ ² ≡ a. ◟ p.
13	57.25	26.5	32	21.7	81	S quad.	4.2	6	Ci.-S. NE	Cu.-N. NNE	------	☊ ² a. ☋ p.
14	57.04	26.8	32.1	21.3	80.2	Variable	3.5	6.3	Ci.-S.	Cu. N	------	☊ a.
15	57.62	25.9	31.9	21.2	76.7	W quad.	3	5.5	Ci.-S. NE	S.-Cu.	------	☊ a. ☋° p.
16	58.49	25.6	32	20.2	82.1	S quad.	3.3	5.2	Ci.-S. NE	S.-Cu.	1.5	☊ a. ☋ ² p.
17	58.61	26.1	31	22.3	85.6	SE quad.	3.2	8	Ci.-S.	Cu.-N. SSW	9.9	● ⌐◪ a. ◟ a. p.
18	58.75	26.8	32	22.2	79.2	S	3.6	8.5	Ci.-S. SW	Cu.-N.	------	≡° ○ a. ┬ ⌐◪ a. p.
19	59.22	26.1	31.3	22.8	86	Variable	2.8	8	A.-Cu. ESE	Cu.-N.	------	◟ ☊ ≡° ☽ ┬ ² ⌐◪
20	60.10	26.2	30.5	21.9	82.7	Variable	2.4	9.2	Ci.-S. SW	Cu.-N. SW	------	┬ ☊ a. ☋° ◟ ⌐◪ p.
21	59.54	26.1	31.9	22.4	81.8	N quad.	3.2	7.3	A.-Cu. SE	Cu. EbyN	------	☊ a. p° ◟ ☋° p. ┬
22	58.86	26.3	32.3	21.4	78.3	N quad.	3.8	4.8	A.-Cu. E	Cu.-N. E	------	◟ ☊ ☊° ≡° ⊕ ² a. ⌐◪ p.
23	58.04	26	32.4	21.8	84.7	SSE, NNW	1.9	5.5	Ci.-S. E	Cu.-N. N, EbyS	------	☋° ☊ ○ a. ┬ ◟ p.
24	57.86	26.8	31.6	22.5	81	S	2.4	9.2	Ci.-S.	Cu.-N. SE	------	┬ ≡° ⌐◪ ┬ ◟ ☋°
25	58.34	26.6	31.7	22.5	82.8	Variable	2.6	8.3	Ci.-S. EbyN	Cu. SSW	3.6	☊ a. ◟ a. p. ┬ p.
26	58.41	27.2	31.2	22.7	79.2	Variable	3.6	8.3	Ci.-S. E	Cu. S	------	◟ ┬ a.
27	57.56	27.3	32.2	22.9	81.2	SE quad.	3.7	5.8	A.-Cu. SSE, E	Cu. S	4.8	☊° a. ◟ p.
28	57.66	27.6	32.3	23.9	79.7	S, NNE	3.6	6.3	A.-Cu. S	Cu.-N.	------	┬ ² ● ◜ ² a. ◟ a. p.
29	58.78	26.7	30.9	23.4	84	Variable	3.4	8.8	A.-Cu. NbyW	Cu.-N. NE	------	◜ a. ┬ ◟ p.
30	58.85	25.8	31.1	21.9	84	SE quad.	3.9	8.2	A.-Cu. E	Cu.-N. E	5.8	☊ p a, d° ┬° ◟ p.
31	58.32	26	29.7	22.7	86	Variable	3.4	8.8	Ci.-S.	Cu.-N. SEbyS	------	┬ ●° ⌐◪ a. ◟ a. p.
Mean	757.97	26.3	31.5	22.1	82.8	----------	3.5	7.1	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	74.2	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.24	26.5	31.5	24	83.8	SE	0.5	6.8	Ci.-S. SW	Cu.-N. ENE	2	d ┬ ● p.
2	58.35	26.7	31	24.3	85.6	WNW	.7	5.5	Ci.-S. SW	Cu. ENE	9.6	● ⌐◪ a.
3	58.22	26.4	31.4	23.4	86.8	WNW	.7	6.3	Ci.-S. SW	Cu. Cu.-N. NE	27.4	● ² ⌐◪ a. p.
4	58.10	25.8	30.3	23.7	89	NW	.8	6.8	Ci. SW	Cu.-N. NE	13	● a. ⌐◪ p.
5	56.92	27.1	30	24.2	81.8	NW	1.7	7.3	Ci. S	Cu. N	------	☋ ² a. ☽ ² a. p.
6	56.51	27.8	31.8	25	77.5	W, WNW	1.2	7.3	Ci. E	Cu. WSW	1	● a.
7	56.91	27.7	32	23.8	81.8	ESE	.7	5.7	Ci.-S, Ci. SSE, SE	Cu. SW	------	
8	56.78	28.1	33.1	23.8	81.3	ESE	.5	3	Ci.	Cu. SW	------	☊ ² a.
9	56.87	27.6	32.7	24.8	85	Variable	.3	5.2	Ci.-S. ESE	Cu.-N. SW	------	◟ a. p. ┬ p.
10	57.34	27.4	32.6	23.8	85.2	ENE	.7	7.3	Ci.-S. E	Cu.-N. W	46.2	● ² ⌐◪ p.
11	57.97	27.4	32.4	23.4	84.3	ENE, E	.7	5.7	Ci.-Cu. SW	Cu. E	4.6	● ┬ p.
12	58.15	27.9	32	23.8	81.2	ESE	.8	4.7	Ci.-S. W	Cu.	------	☊ ² a.
13	57.80	28	34	24.4	78.2	NW quad.	.8	5.5	Ci.-S. SW	Cu. N, NE	------	d p.
14	57.47	28.2	34	24.8	79	N, NE	.7	4.5	Ci.-S. SSW	Cu. N, NE	1.3	● p.
15	58	28	33	24.2	75	NNW	.8	5.3	Ci., Ci.-S. SSW	Cu. E	------	☊ ² ○ ² a.
16	58.64	28.3	34.2	23.6	78	Variable	.5	5.5	Ci. NE	Cu. W	------	☊ ² a. ☋ ² ◟ p.
17	58.80	28.1	33	24.1	80.9	Variable	.5	6.3	Ci. NE	Cu. W	------	┬ ⌐◪ p.
18	59.20	27.2	33.2	24	84.2	WNW	.5	6.8	Ci. NNE	Cu., Cu.-N. wsw, wnw	20.1	┬ ◟ ○ ² ⌐◪ ² ⸗ ° ◜
19	59.56	27.3	32.2	23.8	84.8	NW quad.	.8	5.8	Ci.-S.	Cu. W	.8	◟ a. p. ☋° d p.
20	60.43	27.3	32.6	23.8	84.2	Variable	.2	7.3	Ci.-S. ENE, NE	Cu. SSW	------	☋° p.
21	60.27	27.9	32.5	24.4	80.5	SSE, SE	1.3	6.5	Ci.-Cu. NW	Cu. SSE	------	◟ a. p. ☊ a. ☋ ² p.
22	59.53	27.8	31.8	25	81.4	SE quad.	.7	6.2	Ci.-S. NW	Cu. SE	2	
23	58.44	28	31.8	25	81.8	SE quad.	.8	6.3	Ci.-S. NNW	Cu. SE	------	● a. ◟ p.
24	58.37	27.6	32	24.3	84.3	SE	.7	8.2	Ci. NNW	Cu. S	2	◟ ○ ² ┬ ◡ ² ☋ ²
25	58.74	28	32.6	24	82.5	SSE	.3	8.3	Ci.	Cu., Cu.-N. S	------	○ ² a. ◡ ² p.
26	58.60	28	33	24.4	82	SSE	.7	8	Ci.-S. NW	Cu. S	1.5	○° a. ● ◜ ◡ ² p.
27	57.81	28.9	32.8	24.3	77.5	SSE	.3	5.5	Ci. NNE	Fr.-Cu. SSW	------	┬ p.
28	58.08	28.9	33.5	25.3	80.4	SSE	.5	7.2	Ci.-S. NNW	Cu. SSW	19.3	○ ² a. ┬ p.
29	59.33	27.8	31.5	24.5	82.7	Variable	.5	8.5	Ci.-S. NW	Cu. ESE	------	● ⌐◪ a.
30	59.56	27.5	32.4	25.3	84.5	E quad.	.5	7.5	Ci.-S. NNW	Cu.-N. ESE	3.5	☊ ² a. ● ┬ p.
31	58.95	26.9	30.3	24.4	86	SE	.8	9	Ci.	Cu.-N. SE quad.	.8	● a. d p.
Mean	758.35	27.6	32.3	24.2	82.3	----------	.7	6.4	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	155.1	

METEOROLOGICAL DATA, ETC.—Continued.

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.15	26	32.9	22.6	86.2	N	1.2	4	A.-Cu.	Cu., Cu.-N. E	17.8	⊤ p² ⊤° ≤ p.
2	58.35	26	32.1	22.9	86.7	N	1	5.2	Ci.-S.	S.-Cu. ENE	5.3	●° ⌐≤ p.
3	58.17	25.7	30.9	22.2	88	N quad.	1	4	Ci.-S.	S.-Cu., Cu. NE	1	≡° ⊤ a. d° ≤ p.
4	57.98	25.8	31.7	22.3	88	N	1	6.3	Ci.-S.	S.-Cu. NE	24.9	≡° p a. ⊤ ≤ p. d
5	57.13	26.3	31.7	22.3	84.8	N	1.2	7.8	Ci.-S.	S.-Cu. N	2.6	≡ a. p. ° d° p.
6	56.01	26.7	29.7	23.9	86.7	W quad.	1.8	8	Ci.-S.	S.-Cu. W	11.4	d° a. ⊤ p ⌐≤ p.
7	56.66	28.1	31.7	24.8	81.8	S quad.	1.3	5.8	Ci.-S.	S.-Cu. SW	1	≤ d p.
8	56.64	28.2	32.7	24.7	78.8	S quad.	1.3	1.2	Ci.	Cu.	------	
9	56.87	27	32.3	23.2	85.4	N	1	3.5	Ci.-S.	S.-Cu. W	------	≡ a. ≤ p.
10	57.16	26.7	32.1	23.6	84	N	1.3	6	Ci.-S.	Variable SE	------	≡° a. d ⌐≤ p. ≤
11	57.97	26.4	31.5	22.8	85.3	N	1.2	4	Ci. NE	S.-Cu. NE	------	≤ a. ⌐≤ p.
12	58.12	26.8	32.7	22.7	84.7	N	1	3.7	Ci.	Cu. ENE	3	p° ⌒ p.
13	57.70	26.8	32.4	22.3	84.5	N	1.2	3.7	Ci. N	Cu. NE	------	Ω² a. ≤ p.
14	57.54	26.6	32.7	22.4	84.7	N quad.	1	3.2	Ci.	Cu. NE	------	Ω a.
15	58.02	26.6	32.9	21.9	84.5	Variable	.7	4.3	Ci.-S.	S.-Cu. NNE	------	Ω ≡° a. ∪ p.
16	58.52	26.8	31.7	22.1	81.8	Variable	1.3	5.8	Ci.-S. SEbyE, Ebys	S.-Cu., NW, WNW	------	∪ p.
17	58.62	26.7	31.7	24.1	87	Variable	.7	6.2	Ci.-S.	S.-Cu. W	31	≤ ●⌐≤ a. d ⊽ p.
18	58.92	27	32.2	23.3	85.5	NW quad.	1	4.5	Ci.-S.	Cu. W	------	⊤ a. ∪ p. ≤ a. p.
19	59.37	26.7	32.6	23.2	83.9	N	1.2	5.2	Ci.-S.	Cu.-N.	------	≡ a. ∪ p. ⌐≤ a. p.
20	60.36	26	31.7	22.9	87	N quad.	1	6.8	Ci.-S.	S.-Cu. SW	------	⌒ a. ⌐≤ a. p.
21	60.02	26.4	32.7	22.4	85.3	N	1.3	3.5	Ci.-S.	Cu., Cu.-N. E	2.3	Ω a. d ⌐≤ p.
22	59.30	26.5	31.8	22.6	84.2	N	.8	3.3	Ci. NE	Cu.	------	≤ Ω a. ⊤ ⊽ p.
23	58.31	26.7	32.5	22.6	84.5	N	1.2	4.3	Ci. NE	Cu.	15.2	≤ p.
24	57.96	26.1	31.2	23.4	87	Variable	.7	8.3	Ci.-S. NE	N. SW	38.1	≤ ⌐≤ a. p. ● a.
25	58.38	27.6	31.6	23.3	82.3	S quad.	1.5	8.2	Ci.-S. N	N. S	8.1	● ⌐≤ a. ⊤ ≤ p.
26	58.25	29	32.2	25.4	75.6	SW	2	8	Ci.-S. N	S.-Cu. SSW	------	
27	57.42	28.5	34.2	25	79.2	SW	1.7	3.2	Ci., Ci.-S.	S.-Cu. SSW	4.3	≤ p.
28	57.88	28	32.9	24.4	83.5	Variable	.8	5.8	Ci.-S. NE	Cu.-N. W	------	≤ ⊤ ●° a. ≤ p.
29	59.06	27.7	31.5	24.4	84.9	Variable	1	7.8	Ci.-S.	S.-Cu.	------	⌒ a. ≤ p.
30	59.22	26.8	31.7	24.1	88.5	N quad.	1	6.8	Ci.-S. NE	S.-Cu. E	7.1	p° ⊤ d ≤ p.
31	58.62	26.2	29.7	24	89.8	Variable	.5	8.2	Ci.-S.	S.-Cu. SE	.5	●° d a. ⊤ ≤ p.
Mean	758.18	26.9	32	23.3	84.6	----------	1.1	5.4	----------	----------	------	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	173.6	

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p.h.*	*0–10.*			*mm.*	
1	759.05	27.5	31.8	24.4	79	E	----------	2.3	A.-Cu., Ci.	Cu.-N. NE	4.1	d a. ● ≤ p.
2	58.23	27.4	31.7	23.5	78.9	E	6.3	2.8	A.-Cu. E	Cu.-N. NE	------	● a.
3	58.06	28.2	32.9	24.1	74.3	NE, ENE	8.7	1.7	Ci.	Cu. NE	------	≤° p.
4	58.10	27.4	32.8	22.4	79.1	NE	10.1	3.3	Ci.	Cu., Cu.-N. ENE, N	1.3	d ● p.
5	56.97	27.2	32.4	22	75	NE	9.6	6.8	Ci.-S.	Cu. NE	.5	● p.
6	55.05	27.4	32.1	24.5	77.7	W quad.	9.2	9.2	Ci.-S.	Cu.-N. NNW, WNW	4.1	d a. ≤ p.
7	55.41	28.1	33.2	25.5	78	WSW, SW	10.6	6.2	Ci.-S.	Cu. SW	------	● a. ≤° p.
8	55.71	28.4	33.7	25	78.5	W	8.8	2.7	Ci., Ci.-S.	Fr.-Cu. WSW	------	≤° p.
9	56.18	28.2	34.7	24	78.4	SW	4.7	4.2	Ci. ESE	Cu. W, SW	.3	⌐≤ d° ≤ p.
10	56.78	27.5	33.5	23	83.5	E, ESE	4.2	2.3	Ci.	Cu. WSW, SW	------	⊤° ≤° p.
11	57.63	28	32.3	24.2	78.8	E	6.1	1.7	Ci.	Cu.	------	≤° p.
12	57.82	27.9	32.1	24.5	76.7	E	6.6	3	Ci.	Cu. ENE, NE	------	≤° p.
13	57.51	27.6	32.3	22.7	77.8	E quad.	6.4	1.2	Ci.	Cu. NE	------	≤° p.
14	57.43	28	33.3	23.5	75.5	E quad.	7.5	.5	Ci.	Cu.	------	≤ p.
15	57.81	27.4	33.1	21.1	75.8	E	6.6	4.3	Ci. E	Cu.	------	≤° p.
16	57.95	27.1	34.5	21.8	74.7	SW, WNW	5.3	6.2	Ci.-S.	Cu. WSW, W	------	≡ a.
17	58.05	26.7	31.5	24.4	82.2	S, SW	6	6.2	Ci.-S., Ci.	Cu.	------	⊤° a. d° ≤° p.
18	58.43	27.5	34.5	23.5	80.2	SW quad.	5	4.5	Ci.	Cu.-N. W	3	⊤° a. d ≤° p.
19	58.97	26.8	33.6	23.2	84	WSW	2.9	4.5	Ci.	Cu. SW	4.4	● ⊤ p.
20	59.91	25.8	31.5	22.7	86	ESE, SW	3.6	4	Ci.	Cu.-N. S	19.1	d ⊤ a. ● p.
21	59.65	27	32	22	82.2	E	5.5	2.3	Ci. N	Cu.	------	≡ ⊤ a. ≤° p.
22	58.79	27.4	32.3	23	80.1	E	6.1	3.3	Ci. SE	Cu.	------	≡ a. ≤° p.
23	57.84	27.3	32.3	22.8	81.1	ESE, E	4	5.8	Ci. NE	Cu.	------	≤° ≤° p.
24	57.38	27.7	33.9	23.7	79.3	Variable	4.9	8	Ci.-S., Ci.	Cu.-N. S, SW	13.7	≤ ● ⌐≤ p.
25	57.92	27.3	32.9	23.5	81.8	SW	5.2	7.8	Ci.-S.	Cu. S, SSW	------	≤ ● a. ⊤ d° p.
26	57.59	28	33.8	23.9	78.9	SW	6.5	8	Ci.-S.	Cu. SW, WSW	------	⌒² a.
27	56.79	28.9	34.8	24.8	72.3	SW quad.	7.1	3.5	Ci.	Cu. SW	------	≤ p.
28	57.22	29.1	34.8	25.2	71.7	SW, WSW	6.4	4.8	Ci.-S. NE	Cu. SW	.8	≤° p.
29	58.40	28.3	35.3	23.7	75.2	W, SW	4.3	6.5	Ci.-S.	Cu. SW	------	● a. ⊤ ≤ p.
30	59	28.1	33.1	23	79.7	ENE	8.8	5.5	Ci. NE	Cu.	------	≡ a. ≤ p.
31	58.31	28.1	32.5	23.7	79.8	ENE, E	6.6	6.5	Ci., Ci.-S.	Cu.	------	≡° ○ a. ≤ p.
Mean	757.74	27.7	33.1	23.4	78.6	----------	6.5	4.5	----------	----------	------	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	51.3	

METEOROLOGICAL DATA, ETC.—Continued.

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	759.21	28.6	32.4	25.3	76.6	NE quad.	---	3.7	A.-Cu. ENE	Cu. NE	------	☋² a. ☾° p.
2	58.38	28.6	31	26.8	78	NE	---	4.8	Ci.	Cu. NE	------	☋° a. ☾° p.
3	58.12	28.9	31.8	26.6	76.2	NE	---	5.5	Ci.	Cu. NE	------	☋° d° a. ☾ p.
4	58.36	28.9	31.5	27.4	74.6	NE	19.3	5.7	A.-Cu. ENE	S.-Cu. NE	3.6	☾ p.
5	57.74	28.9	30.7	26.1	76.7	N	25.3	8.3	Ci.	S.-Cu. NE	3.6	●° a. ☾° p.
6	55.30	29.3	33.9	25	72.2	N quad.	13.8	8.7	Ci., Ci.-S.	S.-Cu. NE	------	●° a. ☌☌° ☾² ⊤°p.
7	54.14	30.1	34.4	26.6	66.3	SW	20.8	7.5	Ci.-Cu. W	Cu. SW	------	☾° p.
8	54.93	29.1	33.8	24.9	73.3	SW	---	7.5	Ci., Ci.-S.	S.-Cu. W	------	☾ p.
9	55.84	28	34.7	22.5	76	SW	10.8	6	Ci.	Variable SW	------	☾ p.
10	56.50	28.6	34.7	24.2	78.1	SW	9.5	3.2	Ci.	Cu.	------	☾° p.
11	57.53	28.2	32.4	24.4	77.7	SW quad.	10	5.2	A.-Cu. ENE	Cu.-N. SE	------	☾ ⊤° a.
12	57.98	28.1	32.5	23.8	79.5	SW	10.1	4.8	Ci. EbyN, E	Cu.-N.,Cu. NW,NE	------	☾ p.
13	57.59	28.1	32.7	24.3	77.9	N, SW	10.8	2.2	Ci.	Cu. NE	------	☰° a. ☾° p.
14	57.48	28.9	32.9	24.3	74.8	N quad.	11.9	.8	Ci.	Fr.-Cu. NE	------	☾° a. p.
15	57.93	29.4	33.7	24.9	71.1	NE	11.5	5.3	Ci. ENE	S.-Cu. NE	9.1	☾ ♉² p.
16	57.82	28.3	32.6	24	78.4	SW	10.1	8.3	Ci.	S.-Cu. W, NW	------	●°☈a. ☈☾☾♉°p.
17	57.64	27.5	32.6	24.4	82.7	SW	10.4	6.5	Ci. E	Cu.-N. NW	------	d a. ☈☾° ☾ ♉ p.
18	58.10	27.6	34.2	24	81.2	SW	9.1	8.2	Ci. S	Cu.-N. SW,W	6.6	●° ☈☾° ☾ p.
19	58.48	28	33.5	23.5	81.4	SW	8.2	6.7	Ci.	Cu.-N. Variable	------	☾ a. p. ☈☾ ♉° p.
20	59.56	26.5	31.6	23.8	83.5	SW	8	8.8	Ci.	Cu.-N. SSW	10.2	d²a. ●☈☾♉☋°p.
21	59.58	26.8	33.7	23.3	84	SW	---	8.2	Ci.	Variable SE, SW	3.6	☈☾ a. p. ● ☾ ♉² p.
22	58.99	27	32	23.3	86.7	SW	---	7	Ci. NE, E	Cu. S	5.1	☈☾ ● ♉ ☋ p. ☾
23	57.49	27.3	33.1	24	82.6	S quad.	9.3	9.3	Ci. N	S.-Cu. S	4.3	d² ☈☾ ☾² p.
24	56.77	27.6	33.5	23.9	81.8	S quad.	9.2	9.7	A.-Cu. E	S.-Cu. S, SW	58.4	☾° a. ☈☾ ● ☾ p.
25	56.72	27	30.2	23.9	85	SW quad.	9.6	10	Ci.-S.	S.-Cu. S	.5	d² p.
26	56.81	26.5	30.2	24.9	81	SW	15.3	9.8	Ci.-Cu. S	S.-Cu. SW, W	.8	d² a. p.
27	56.28	28.5	32.3	24.4	72.5	SW	10.1	6.7	A.-Cu. WSW, W	S.-Cu. W	------	♉° a. ☈☾ p.
28	56.68	28.5	32.7	24.8	74.2	W quad.	---	8.2	Ci. NW	Cu. SW, W	------	d° ☾ p.
29	58.12	27.8	33.5	24	77.3	SW	9.7	7	Ci. WSW	S.-Cu. SW	3.8	●° ☈☾ ☾° p.
30	58.66	26.8	33.5	23.3	86	E, SW	9.3	8.7	Ci. W	S.-Cu. SE, S	------	♉° a. ☈☾ p.
31	58.43	27.1	32.4	24.2	87.2	SW	7	8.5	A.-Cu. SE	Cu., Cu.-N. SE,S	6.4	☾° a. ☈☾ ● ☾ p.
Mean	757.52	28.1	32.7	24.5	78.5		11.6	6.8			------	
Total	------	------	------	------	------		------	------			116	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	758.92	27.6	33.1	22	71.8	NW	1.2	4	Ci.	Fr.-Cu. E	------	☊° a.
2	58.10	28.2	35	22.7	73	NE	1.2	5.5	A.-Cu. SE	N.-cf.,S.-Cu. ESE	1.5	☾ d² p.
3	57.90	28.4	34.4	23	70.6	NE quad.	1.2	4.8	Ci.	Cu.-N. NE	------	☊° a. ☾ p.
4	58.25	28.4	34	23.1	69.3	NE quad.	1.3	4.5	Ci.	Cu. E	------	☊² ☰ a. ☾ ⊤ p.
5	57.79	28.6	34.2	23.4	70.3	N quad.	1.2	5.8	Ci. SE	Cu. NE	2	☊² ☾° a. ☾ ⊤ ● p.
6	55.93	27.4	35.2	23	81	NW quad.	.7	6.7	Ci.-S. SE	Cu.-N. NW	11.2	☊² a. ● ☈☾ ☾ p.
7	54.44	28.1	34.1	24	75.5	WNW	1.7	6.2	Ci.-S. E	N. NW	------	☊² a.
8	55.19	28.5	34.6	24.9	73.8	W quad.	1.5	8	Ci.-S. NE	Cu. W, WSW	------	☾° a.
9	56	28.3	34.3	23	73.3	W quad.	1	6.3	Ci. N	Cu. NW	------	☊² ☰ a. ☾ p.
10	56.58	29.5	35.2	24.5	67.7	NW	1	6.8	Ci.-S.	Cu. NW	------	☾ p.
11	57.34	28.8	34.1	25.5	74.3	E, NW	.8	7.5	A.-Cu. NE	S.-Cu. W	------	d° p.
12	57.66	28.3	35.5	23.5	77.8	E quad.	.8	7.2	Variable	Cu. NE, SW	5.6	☊° a. p. ●° p.
13	57.20	28.4	35.7	24	79.5	Variable	1.2	7.3	A.-Cu.	Cu.-N. E	46.5	☊² ☰ a. ⊤ ☾ ●² p.
14	57.34	27.8	33.3	24.5	83	E quad.	1.3	7.8	Ci., Ci.-S.	N. NNE	------	●² a. ⊤ p.
15	57.62	28.1	34.7	23.8	79.5	Variable	1.2	6	A.-Cu.	Cu., N.-cf. NE	.8	☊²☰a. ●° ☾ ☈☊p.
16	57.83	28.2	34.9	24.5	79.8	N quad.	.8	7.7	Ci.-S. S	Cu. NW	------	d° a. ☽² ☾ p.
17	57.77	28.5	34.7	23.6	77.7	W quad.	1	5.8	Ci.	Cu. WNW, W	1.8	☊² a. ●° ⊤ ☾ p.
18	58.21	28.6	34.8	24	75.6	SW quad.	.8	6.2	Ci. NE	Cu.-N. W, WSW	------	☊² a. ☾ a. p.
19	58.27	28.8	35.2	23.1	76.1	SSW, NW	1.3	6.7	Ci.-S. NE	Cu. S	------	☊² a. ⊤ ☾ ♉² p.
20	59.43	28.1	33.9	23.7	79	SSW, E	1	7.5	Ci. NE	Cu., Cu.-N.W,SW	------	☊² ☾² a. ☋² ☾ p.
21	59.41	28.2	34.7	22.8	77	SSW, NE	1	8	Ci.-S.	Cu. Variable	------	☊² a. ☾ ⊤ ☋² p.
22	58.50	27.9	35.9	23.5	79.2	ESE	.7	7.5	Ci.-S.,Ci.	Cu. ESE, S	------	☊² ☰ a. ☋² ☾ p.
23	57.14	28.2	33.7	23.5	79	S quad.	1	8	Ci.-S. NW	Cu.-N. S	1	☾² a. ☾² a. p.
24	56.69	26.4	30.6	23.6	86.5	SSW	1	10	Ci.-S.	N. S	45.5	d a. p. ⊕² a.
25	56.13	25.1	28.2	23.5	92	S quad.	2.3	10	Ci.-S.	N. S quad.	38.1	●² a. p. ☾ p.
26	56.37	26.1	30.1	23.7	89.2	SSW	1.8	10	Ci.-S.	N. SW	2	● d a.
27	56.46	26.3	30.4	23.6	88.3	SW	1.8	8.2	Ci.-S.	N. SW	13.4	☊² ●° a. ● p.
28	57	24.8	30.2	23.6	94	SSW	1.8	10	Ci.-S., A.-S.	N. SW	31.7	●² d° ☈☾ p.
29	58.26	25.3	30	23.2	91.5	S quad.	1.3	9.3	Ci.-S.	N. SW, S	8.4	☊² a. ● p.
30	58.42	27	32.7	23.2	85.8	SSW	1.2	7.5	Ci.,A.-Cu. W	N.-cf., Cu.-N. S	1.3	☊² d² ⊤ p.
31	58.24	27.6	34.2	23.4	83.5	SE quad.	.8	6.3	Ci. NW	Cu.-N., N. SE	2.8	☊² a. ⊤ d² ☾ p.
Mean	757.43	27.7	33.6	23.6	79.2		1.2	7.2			------	
Total	------	------	------	------	------		------	------			213.6	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.87	28.6	34.9	22.7	74.3	Variable	11.9	3.8		Cu., S.-Cu.		⊤ p.
2	58.01	29	35	23.6	72.9	Variable	10.9	4.5	Ci.	Cu.		↘ a. p.
3	57.88	28.6	34.6	24.2	77.4	SE, NW	11.5	5.3	Ci.	Cu., S.-Cu.		↘° a. p. ⊤ p.
4	58.01	29	36.8	24	75.2	SE, NW	10.8	4.2		S.-Cu.	10.4	p p. ↘ ⊤ a. p.
5	57.75	28.8	34.8	23.6	75.8	SE, NW	9.3	5.2	Ci.	S.-Cu.		p a. ↘ p.
6	55.94	28.5	33.7	24.2	79.2	NW	11.5	7.3	Ci., Ci.-S.	S.-Cu. NNW		⌒ ↘° p.
7	54.32	28.3	31.6	25.5	79.9	NW	20.2	10	Variable	S.-Cu. NW	3.5	↘ ⊤ d° a. p p.
8	55.33	28.9	32.6	26.8	76.3	NW	20.7	8.5	Ci.-S.	S.-Cu. NW		p a.
9	55.94	28.2	32.6	23.2	76.7	NW	12.3	7.3	Ci.-S.	S.-Cu. NW		
10	56.51	29	33.1	24.6	73.2	NW	11.5	4	Ci.	Cu., S.-Cu.		↘° a.
11	57.30	29	33.7	26	76.3	NW quad.	7.7	7.2	A.-Cu.	S.-Cu.		
12	57.47	28	33.6	24.1	81.2	NW quad.	11.1	6.3	A.-Cu.	Cu. SE		↘ p.
13	57.01	29.1	35.2	24.6	76.5	SE, NW	11.3	5.2	A.-Cu.	Cu., S.-Cu.	8.6	⊤ ↘ p.
14	57.25	28.1	34.3	24.4	82.8	SE quad.	9	9.2	A.-Cu.	S.-Cu. SE		p² ↘ ⊤ a. ⌒° p.
15	57.37	29.6	35.3	25.5	77.1	SE, NW	10.1	6.7	Ci., A.-Cu.	S.-Cu.	1.3	↺° ↻ ↘ p.
16	57.67	29.2	33.6	25.3	78.7	NW	12.1	5.8	Ci.	Cu., S.-Cu.		d ⊤ ⌒ a. ↻ ↘ p.
17	57.68	28.6	33.6	24.1	77.3	NW	11.2	3.7	Ci.	Cu., S.-Cu.		↘ p.
18	58.04	28.7	34.5	23.4	75.4	Variable	10	3.5	Ci., Ci.-S.	Cu., S.-Cu.	23.4	↘ p.
19	58.18	28.1	35.8	23.2	80.2	Variable	7.7	6.7	Ci.	Cu. SE		p² a. ⊤ ↻ p.
20	59.21	26.9	34.4	23.5	86.2	Variable	7.3	9.5	A.-Cu.	S.-Cu., N.	10.2	↘ a. p ● ↘ p.
21	59.19	27	35.7	22.8	85.2	Variable	9.5	7.8	A.-Cu.	S.-Cu., N.	16	d² ● ↘ ⊤ p.
22	58.42	27.7	35.6	24	83.5	S	9.4	9.5	Ci.-S.	S.-Cu. SE		● a. ⊤ ↘ p.
23	57.15	26.5	32.8	23.9	89.1	SE, SW	8	9.8	Ci.-S. N	Cu.-N. S	12.7	⊤ ● p.
24	56.31	24.7	26.8	23.8	95.7	SE	11.3	10		N.	95.5	● a. ●² p.
25	54.99	24.5	25.8	23.3	97.2	SE	21.5	10		N. SE, SW	58.5	●² a. ⊤ a. p. ● p.
26	56.20	25.8	29.6	23.8	93.3	SE	9.8	10		S.-Cu., N. SW	5.3	● ⊤ a. p.
27	56.09	26.8	33.6	23.4	88.5	SE quad.	7.1	9.7	A.-Cu.	S.-Cu. W	23.6	d a. ⌒ ● p.
28	56.62	25.5	30.8	23.3	93.2	SE quad.	9.7	9.8	A.-Cu.	S.-Cu. WSW	31.5	● a. d² ● p.
29	58.03	24.4	25.9	23.5	96.7	SE	10.4	10	A.-Cu.	S.-Cu. SE	43.2	● a. p.
30	58.13	26	31.8	23.3	89.5	SE, S	11.1	9.5	A.-Cu.	S.-Cu. SE	22.1	d a. ⊤ ●² p.
31	58.02	27.6	34.7	23.2	88.8	SE	8.4	7.7	Ci., Ci.-S.	Cu. SE		↻² ≡ a. ⊤ ↘ p.
Mean	757.25	27.7	33.1	24	82.2		11.1	7.3				
Total											360.8	

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.71	28.5	33.7	23.6	74.9	SE, NNE	2.8	4.5	Ci.	Cu., Cu.-N.		↘ p.
2	57.88	29.2	33.1	25.4	74.9	N quad.	2.7	5.5	Ci.	Cu.	3	↻ a. ↘ p.
3	57.76	29	32	25.1	77.2	NNE	3.3	8.3	Ci.-S.	Cu-N.	26.2	⌐↻° ≡° a. ⊤ ↘ p.
4	57.90	28.5	33.4	24.9	83.7	Variable	2.2	7.5	Ci.-S., Ci.	Cu. SSE		⌐↻² ≡° a. ↘ p.
5	57.48	29.3	33.4	25.3	78.3	SE quad.	2.7	8.8	Ci.-S.	Cu.-N.		↻ ≡° a. ↘ a. p.
6	55.84	28.8	32.4	25.1	81.8	N	2.7	10	Ci.-S.	Cu.-N., Cu.		↘ ↻ ≡° a.
7	54.67	28.4	30.9	25.7	83.2	NW quad.	5	10	Ci.-S.	Cu.-N.	2.3	⌐↻° ↙° ●° a. ● p.
8	55.44	29.2	32.7	27	78.2	WNW	4.2	9.7	Ci.-S.	Cu. WNW		
9	55.98	28.4	32.4	24.2	80.7	NW quad.	1.8	9.7	Ci.-S.	Cu.		↻ ≡° a. ↘ p.
10	56.51	28	32.9	23.3	81.3	N quad.	1.8	7.7	Ci.-S.	Cu.		↻² ≡° a. ↘ p.
11	57.20	28.2	32.3	24	80.5	NW quad.	1.7	6.8	Ci.-S., A.-Cu.	Cu.-N.		↻° ≡° a.
12	57.36	27.7	31.9	24.2	85.3	NW quad.	1.5	9.2	Ci.-S.	S.-Cu., Cu.-N.	5.6	↻ ≡° ●° ⌐↻ a. ↘ p.
13	57.01	28.8	32.4	24.4	82.3	N quad.	2.3	6.8	Ci.-S., A.-Cu.	Fr.-Cu. NNW		↻ ≡° . ⊤ ⌐↻ ↘ p.
14	56.94	29	33.1	25.9	81.5	Variable	1.5	8.8	A.-Cu.	Cu.-N.		↘ ⌐↻ a. p.
15	57.36	29.2	34.4	25	81	Variable	1.8	7.7	Ci.-S.	Cu.-N., Cu.		↘ ⊤ a. ↘ p.
16	57.52	29.4	33.1	25.7	80.7	NW quad.	3	6.3	Ci.-S.	Cu. NNW		↘ ⊤ d a.
17	57.58	29.2	33.3	25.5	77.3	NW quad.	2.3	8.5	Ci.-S.	Cu.		↻° a. ↘ a. p.
18	57.91	28.4	33.9	23.8	81.7	Variable	1.8	3.7	Ci., Ci.-S.	Cu.		↻ °a. ↘ a. p.
19	57.91	29	34	25	84.1	S quad.	2.5	8.2	Ci.-S.	Cu.-N., Cu.	4.6	↻ ≡° a. ●° ⌐↻ p. ↘
20	59.05	28.3	34.1	24.6	84.5	SW quad.	2.5	10	Ci.-S.	Cu.-N.		● a. ⌒ p. ⌐↻ ↘
21	58.95	27.8	34.5	24.2	88.2	SE quad.	2.5	9.8	Ci.-S.	Cu.-N.	65	↘ ↻ ≡° ⌐↻ ↙° ●²
22	58.29	27.8	33.5	24.4	91.3	SE quad.	1.5	10	Ci.-S.	Cu.-N.	4.1	⊤ ●° a. ⌐↻ a. p.
23	56.89	25.6	30.4	23.5	96.5	S quad.	2	10		Cu.-N.	31.1	⌐↻ ● a. p. ↙° ↘ p.
24	55.66	24.4	24.9	23.4	97.8	SSE	3	10		N.	380	● a. ●² ⊤ ⌐↻ p.
25	53.80	24.5	26.2	22.5	98.7	SSE, S	4.3	10		N., Cu.-N.	149	⌐↻ ●² ↙° ⊤ ↘
26	55.74	25	28	23.1	98.3	SSW	1.5	10		N.	76.3	●² ⌐↻ a. ● p.
27	55.70	26.2	30.2	23.3	92	S quad.	2.2	10	A.-Cu.	N.-cf.	2.8	● d a. d ⊤ ↘ p.
28	56.06	25.6	30.3	23.5	94.3	S quad.	1.8	10	A.-Cu.	Cu. SbyW	17.5	● a. p.
29	57.23	24.2	25.6	23.4	97.9	SSE, SE	2.7	10	Ci.-S.	N.	90.4	↻² ●° ⌐↻ a. ⊤ ●² p.
30	57.89	24.9	28.5	23.1	97	SSE, SE	1.7	10	Ci.-S.	N.-cf., S.-Cu.	14.3	⌐↻ ●° a. p. ↘ p.
31	57.77	27.4	32.9	23.4	86.3	SSE	2	10	Ci.-S.	Cu.-N.		⌐↻ ↘ p.
Mean	757.03	27.7	31.8	24.4	85.5		2.4	8.6				
Total											872.2	

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.

[ϕ16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km.p.h.*	*0–10.*			*mm.*	
1	637.13	18.8	23.8	15.6	87.5	E, WSW	13	6.3	Ci.	Fr.-Cu. E, W	2.8	☊ a. ● ≡ p.
2	36.34	17.9	23.2	15.6	94.7	W quad.	10.7	7	Ci.	S.-Cu. WNW	1.6	☊ a. ≡ d ⊤ p.
3	36.16	18.8	24	16	90.2	W quad.	8.7	7.3	A.-Cu., Ci.	S.-Cu. NE	21.3	☊ ≡° a. d ● ⌐◹ p.
4	36.54	18.8	23.5	16	90.5	W quad.	10	6.9	Ci.	Fr.-N. E	------	☊ ≡ a.
5	36.24	18.8	23.9	16.1	91	E	11.1	9	Ci.	S.-Cu., Fr.-Cu. N	------	☊ a. ≡ ⊤ p p.
6	34.67	18.2	24.1	16	93.8	W quad.	12.5	9.4	Ci.-S.	Cu. NbyW, NNE	1.8	☊ a. ≡ ● ⌊ ◹ d° p.
7	32.84	17	20.8	15.9	97	NW quad.	24.3	10		Fr.-N. NW	9.7	≡ ● d a. p.
8	33.62	16.7	19.3	15.4	95.8	NW	25.9	10		N.	12.2	●² a. ≡ d a. p.
9	34.57	18.2	23.2	15.5	87.3	NW quad.	13.4	9.1	Ci.-S.	S.-Cu. NNW	------	≡ p.
10	35.07	18.8	24.2	16	87.3	Variable	10.7	5.7	Ci.	S.-Cu. W, WNW	3	☊ a. ≡ p.
11	35.85	17.9	21.8	16.3	93.8	Variable	9.3	9.3	Ci., Ci.-S.	Cu.-N.	4.8	● a. p. ≡² p. d° a.
12	35.93	18.7	23.2	16.1	91.7	W quad.		9.3	A.-Cu. ENE	S.-Cu. E	10.4	≡² ● p.
13	35.81	18.7	23.2	16.5	94	W, E	8.7	9.9	Ci.	S.-Cu. ENE	12.2	d a. ● ≡° ⊤ p.
14	35.72	18.9	23.1	17	91.8	Variable	8.9	9.9	Ci.-S.	N. N	------	≡ ⌐◹ p. d a. p.
15	36	19.2	24.4	16.6	89.5	W quad.	11.8	8.9	Ci.	S.-Cu. NNW, N	------	≡ ⊤ p.
16	36.07	18.9	24	16.4	81.9	NW quad.	14.8	9.3	Ci.	Fr.-N. N	------	☊ ≡² a. ⊤ p.
17	35.98	18.8	24.2	15.3	66.1	W	13.2	6.9	Ci.	S.-Cu. NW	------	≡ p.
18	36.44	19	24.7	15.3	73.1	W	11.4	4.3	Ci.	Cu. WNW, SW	------	≡ p.
19	36.61	18.9	25.4	15.7	80.5	Variable	8.3	6.3	Ci.	Cu.	39.1	☊ a. ● ⊤ ≡° p.
20	37.26	18.4	22.7	15.7	92	W	7.7	9.4	Ci.-S.	Cu.-N.	12.7	◯² a. ●° ≡¹ ⌐◹ d p.
21	37.25	18	23.1	15.9	88.3	SE quad.	9.7	7.7	A.-Cu.	S.-Cu., Cu.	12.2	≡² ⌐◹ a. p. ⊤ ● p.
22	36.67	18	23.3	16	92.3	E quad.	8.4	9.1	Ci.-S.	N.	25.2	☊ ≡² a. ⌈ ◹² p. ●
23	35.42	17.3	22.3	15.8	96.3	E, W	11.3	9.1	Ci.-S.	Cu., N.	19.8	≡² ◯² a. d ● p.
24	34.39	16.6	17.5	16	96	S quad.	18.6	10		N.	97.3	d° a. ● p. ≡² a. p.
25	32.94	17.5	18.8	15.7	93	SW, SSW	28.3	10		N.	110.2	●² a. p.
26	34.21	17.4	18.8	15.4	97	W	29	10		N. SW	57.2	d° ● ≡² a. p.
27	34.30	17.6	23.8	15.9	97.3	W	7.9	9.6	Ci.-S.	Cu.-N.	24.9	d° ● a. p.
28	34.52	17.1	20.3	15.8	97.8	SW quad.	17.6	9.3	A.-Cu.	S.-Cu. SW	25.7	≡² ● p.
29	35.74	16.3	18.1	15	97.2	S quad.	9.7	9.7	A.-Cu. SSW	S.-Cu. SSW	31.8	d a. ● p.
30	36.50	17.5	21.7	15.1	87	E, S	13.9	9.6	A.-Cu. SSW	S.-Cu. SSE	6.1	●° d° p.
31	36.49	18.8	24.8	15.9	85.2	SE quad.	10.8	6.7	Ci. W	Cu. SE	.8	⊤° ⌐◹² ≡² p.
Mean	635.59	18.1	22.6	15.9	90.2		13.3	8.5				
Total											542.8	

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.10	28.5	33.5	24.6	74.5	Variable	1	0	Ci.-S.	Cu.	------	
2	58.32	28.3	32.9	24	74.2	N quad.	1.2	1.7	Ci.-S., Ci.	Cu.	------	☊ a. ⌐◹ p.
3	58	28.6	33.2	25.1	74.1	NE quad.	1.3	1.5	Ci.	Cu.	------	⌐◹° p.
4	58.18	29	33.5	24.8	70.2	ESE	1	.5	Ci.-S.	Cu.	------	◹° p.
5	57.56	29.8	34.6	25.9	60.4	Variable	1	.3	Ci.-S.	Cu.	------	◹° p.
6	55.97	28.9	34.9	24.9	65	N quad.	1.5	2.3	Ci.-S.	Cu.	3.3	d° ◹° p.
7	54.31	26.8	29.5	23.5	85	N quad.	2.2	8.2	Ci.-S.	Cu.-N. NNE	10.2	● a. p. ⌐◹° p.
8	55.26	28	30.7	25.3	80.2	W quad.	2	9	Ci.-S.	Cu.	------	
9	56.25	28	32.6	24.2	73.5	Variable	.8	.2	Ci.-S.	Cu.	------	
10	56.82	27.8	33.1	23.3	76.3	Variable	1	.2	Ci.-S.	Cu.	------	◹° p.
11	57.49	27.7	32.8	23.9	77.2	Variable	.7	3.5	A.-Cu.	Cu. EbyS	------	◹ p.
12	57.53	28.3	33.4	24.8	74.7	Variable	1	3.5	Ci.-S.	Cu.	------	◹° p.
13	57.21	28.7	33.4	25.4	73.8	N quad.	1	5.2	A.-Cu.	S.-Cu., Cu.	------	◹° p.
14	57.11	29.1	33.4	26.1	75	S quad.	1	3.7	A.-Cu.	Cu.	------	
15	57.52	29	33.6	25.4	74	Variable	.8	.7	A.-Cu., Ci.-S.	Cu.	------	⌐◹° ◹° p.
16	57.71	28.6	34	25	71.5	Variable	.8	1.2	Variable	Cu.	------	☊ a. ⊕ p.
17	57.65	27.8	33.5	23.3	72.9	NE quad.	1	.7	Ci.-S., Ci.	Cu.	------	⊕ p.
18	58.16	28.3	33.6	24	69.7	Variable	1	.3	Ci.-S.	Cu.	------	◹° ⊕ p.
19	58.39	28.6	33.6	24.4	72.7	Variable	1	1.5	Ci.-S.	Cu.	12.2	⌐◹ d ● p.
20	59.50	27.2	31.3	23.5	79.8	S quad.	1	7.3	A.-Cu.	Cu.	------	d ⌒ a.
21	59.24	27.8	33.3	23.7	77.2	Variable	.8	6.5	Ci.-S.	Cu.	21	⌐◹ ● p.
22	58.58	27.3	32.8	23.4	81.7	NE quad.	.8	8.7	Ci.-S.	Cu., S.-Cu.	14.3	d a. p. ⌐◹ ● p.
23	57.13	26.2	31.9	23.4	86.1	S quad.	1	9.8	Ci.-S.	Cu.-N., N.	31.8	d° a. d ● p.
24	55.84	24.9	28.1	23	89.7	SE quad.	1	10	Ci.-S.	N.	72.6	● a. p.
25	53.48	23.6	25.4	22.4	96	SE quad.	1.7	10		N. SSE	193.7	●² a. p. ⊤° a. ⌐◹ p.
26	55.55	25.7	27.9	23.8	96	S quad.	1.3	9.7	Ci.-S.	Cu.-N. WbyN	17.1	● a p.
27	55.81	26.5	29.9	23.4	87.2	SE quad.	1	8.2	Ci.-S.	Cu. SSW	8.4	⊕ a. d ● p.
28	56.06	25.6	29.5	23.9	91.6	S quad.	1.5	8	A.-Cu., Ci.-S.	Cu. SSW	13.3	● a. p. ⌒ a.
29	57.30	25.3	26.8	24.1	88.8	S quad.	1.3	10		N.	10.2	● a. p.
30	57.92	26.5	30.3	24.3	82.1	S quad.	1.5	9.8	Ci.-S.	Cu.-N., S.-Cu.	------	d° a. d p.
31	58.16	26.6	31	24	84.5	SE quad.	1	7.7	Ci.-S.	S.-Cu.	28.7	⌐◹° d ●² p.
Mean	757.20	27.5	31.9	24.2	78.6		1.1	4.8				
Total											436.8	

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	759.24	28.4	36	22.2	73	SW	0.3	0.2	----------	Cu.	------	☊ a.
2	58.16	28.4	36.3	22.3	73.5	SE	.5	2	----------	Cu.	------	☊ a. ☾ p.
3	58.15	28.5	36.2	22.5	73.8	S	.2	2.7	Ci.-S.	Cu. S	------	☊² a.
4	58.82	27.6	35	21.6	75.7	NE	.5	4.2	----------	Cu. ESE	------	☊ a. ⌒² ☾ p.
5	58.73	27.4	33.1	22.3	76.6	NE	.7	4.8	Ci.	Cu., Cu.-N. N	------	☊ a.
6	56.54	26	32.2	22.8	87	NW	1.8	8.2	----------	Cu.-N. N	111.2	☊² a. ●² ⊤ ☐☾ p.
7	52.48	24.5	29	22.2	89.5	NW	1.5	9.5	Ci.-S.	Cu.-N. NW	34.3	●² d a. ●² p.
8	53.56	26.3	32.3	22	86.8	SE	.3	8.8	Ci.-S.	Cu.-N.	------	
9	55.38	28	35	22	76.8	NW	.7	6	Ci.	Variable	------	☊² a. ☾ p.
10	56.39	28.4	34.8	24.2	79.3	NE	.3	3	Ci.	Cu. SE	------	☊ a.
11	57.29	28.4	36.4	23.7	80.7	SE, NW	1	3.7	Ci.-S.	S.-Cu. S	------	☊² ≡ a.
12	57.28	28.9	35.8	24.4	80	SE	1	5.7	Ci., Ci.-S.	S.-Cu. SE	------	☊ a. ☾ p.
13	57.11	29.1	36	24.8	76	SE	1.2	5.5	Ci.	Cu. S	------	☊ a.
14	57.19	29.4	36.5	23.5	72	NE	.7	4	A.-Cu. SE	Cu. SE	------	☊ a.
15	57.72	28.7	35.1	22	69.5	NW	.3	1.3	Ci.	Cu. NW	------	☊² a.
16	57.88	27.2	33.7	20	70.5	NW	.3	3.3	Ci.	Cu. NW	------	☊² a.
17	57.70	27.6	33.6	21.9	73.2	Variable	.5	4.2	Ci.	Cu. NW, NE	------	☊² ≡² a.
18	57.89	29	35.6	23.6	70.7	Variable	.7	6.2	Ci.	Variable NW	------	☊ a. ☾ ☐☾° p.
19	58.34	28.7	36.5	23.4	75.2	SE	.7	5.3	Ci.	Cu. SE	17.5	☊ ≡ a. ☐☾ ● p.
20	59.39	27.1	36.2	23.6	83.5	Variable	.7	8.7	Ci.-S.	Cu.-N. E	12.5	● a. p. ☐☾° p.
21	59.78	27.2	34.6	23.5	82	SE	.3	8.5	Ci.-S. NE	Cu.-N. S	2.8	● a. ● ☾ p.
22	58.94	26.7	34.4	23.5	84.3	SE	.2	8.2	A.-Cu. WNW	Cu. S	83	●² ☐☾ ☾ p.
23	57.39	25.9	32.4	23.2	88.5	SE, NE	.3	10	Ci.-S.	N. NE	21.6	d² a. ● ☐☾ p.
24	56.76	25.4	28.2	23	92.5	SW	.3	10	----------	Cu.-N. SW	8	● a. p. ☾ a.
25	55.12	23.9	26.4	23.2	94	SE	.7	10	----------	N.	68.9	● a. ●² p.
26	53.85	27.5	33.4	23.3	84.5	SW	.5	8.2	A.-Cu.	S.-Cu. SW	------	● a.
27	55.19	27.3	34.6	23.2	84.5	SE	.2	6.7	A.-Cu. SW	Cu. S	4.1	☊² a. ● p.
28	56.08	25.9	32.2	22.9	89.8	Variable	.5	8	A.-Cu.	Cu.-N. NW	2.8	d a. ☐☾ ● d² p.
29	57.50	26.1	29.2	23.7	90.3	SE	.2	9.5	Ci.	Cu.-N., N. S	5.3	d a. ● d p.
30	58.31	26.9	31.4	23.5	85.3	S	.3	9.3	Ci.-S.	N., Cu.-N.	5	● a. d p.
31	58.08	28.1	35.4	22.7	78.7	SW, NE	.3	8.8	Ci., Ci.-S.	N.	------	● a. ☐☾ d ☾ p.
Mean	757.17	27.4	33.8	22.9	80.6	----------	.6	6.3	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	377	

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters, gravity correction not applied, —1.57 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	759.44	27.8	33.5	23.1	75.7	Variable	12.3	----------	----------	----------	------	∞ a. p.
2	58.40	27.8	33.1	23.1	78.2	Variable	11.5	----------	----------	----------	------	∞ a. p. ☾ p.
3	58.53	27.7	32.1	22.6	76.7	SW, NE	8.9	----------	----------	----------	------	☊ a.
4	59.42	26.9	32.2	21.6	76.8	NE quad.	11.3	2.7	----------	S.-Cu. E	------	☊ a. ⌒ ☾ p. ∞
5	59.44	27.6	31.7	23.6	77.5	NE, E	11.2	.7	----------	Cu.-N.	1.3	☊ a. ∞ a. p.
6	57.06	27.7	31.9	23	80.5	NE quad.	18.4	8.3	A.-Cu. E	Cu.-N., N. NE	15	● a. p. ☾ p.
7	51.94	25.5	28.1	24	89.5	NW, quad.	42.3	10	----------	N. N	21.7	☇° ● a. p.
8	53.42	25.8	28	22.6	87.9	W, SW	17.4	9.7	----------	S.-Cu., N. W	9.4	☇° ● a.
9	55.64	26.6	32.9	22.2	79.8	Variable	11.5	3.3	Ci. S	S.-Cu. W	------	☾ p.
10	56.92	27.4	31.5	23.6	83	N, S	8.9	.5	----------	Cu.-N. S	------	☊ a. ☾ p.
11	57.69	27.7	32.5	24	81.2	W, N	8.6	1.3	----------	Cu.-N. S	------	☊ a. ☾ p.
12	57.78	27.7	33.3	23.6	82.2	SW, N	10.7	1.5	A.-Cu. W	Cu. S	------	☊ a. ⊤° ☾ p. ∞
13	57.67	28	32.6	24.6	81	N	8.8	1.2	----------	Cu.-N. S	------	☊ a. ∞ a. p. ☾ p.
14	57.58	28	32.1	24.4	80	Variable	10.9	.2	----------	Cu. S	------	☊ a. ∞ a. p. ☾ p.
15	58.23	27.4	32	22.4	74	SW, NE	11.4	.5	----------	Cu. E	------	☊ a. ∞ a. p.
16	58.46	26.6	31.5	22.5	78.8	N	8.9	.3	----------	Cu.-N.	------	☊ a. ∞ a. p.
17	58.01	26.9	31.5	22.6	79	NW, quad.	9.8	6.2	A.-Cu. W	Cu.-N. N	------	○ a.
18	58.20	27.7	32.3	23.6	77.2	Variable	8.7	2.3	----------	S.-Cu. W	------	☊ a. ∞ a. p. ☐☾° p.
19	58.53	27.9	33.7	23.8	77.2	Variable	11.1	2.3	Ci.-S., A.-Cu.	S.-Cu., Cu.-N.	------	∞ a. p. ⊤° p.
20	59.50	27	33.1	24.1	79.7	Variable	11	5.8	Ci.-S., A.-Cu.	S.-Cu., Cu.-N. W,S	------	☊ ∞ a. ⊤° ☾ p.
21	60.11	26.5	30.3	23.5	83.8	S, NE	12.1	8.5	----------	S.-Cu., Cu.-N. SW,SE	21.8	⊤° ☾ ● p.
22	59.22	26.1	31.5	23	81.7	SW, NE	8.4	8.2	A.-Cu. S, W	Cu.-N. E	14	⊤° p. ● a. p.
23	57.82	25.6	29	23.4	87.7	SW	8	10	----------	S.-Cu. SW	19.8	● p.
24	56.69	25.3	27.2	23	89.3	S, E	9.3	10	----------	S.-Cu., N. SW	5.1	● a. p.
25	55.22	24.3	25.7	21.1	90.3	SE quad.	10.6	10	----------	N. S	42.9	● a. p.
26	53.95	25.6	28.5	21	86.2	Variable	20.3	10	----------	S.-Cu. N, NW	16.3	● a. p. ☐☾ p.
27	55.46	26.2	31.5	22.6	84.3	N, NW	10.4	8	A.-Cu. SW	S.-Cu. W	------	⊤° ☾ p.
28	56.25	24.9	28	23.7	92.3	Variable	6.5	10	----------	S.-Cu. SW	12.7	● a. p.
29	57.52	25.8	28.5	23.5	87.4	SE, S	7.7	10	----------	S.-Cu. SW	.6	●° a. ☾ p.
30	58.26	25.9	29.8	22.6	88	SE	11.9	10	A.-Cu. W	S.-Cu. SW	8.2	●° a. ☐☾ ● p.
31	58.28	26.4	33	22.3	84.3	Variable	9.6	9.3	Ci. W	S.-Cu. W	4.5	○ a. ☐☾ ● p.
Mean	757.44	26.7	31.1	23.1	82.3	----------	11.9	5.2	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	193.3	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.
[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.6	22	94	63	7	10	------	♌² a. ☇² p.
2	33.7	22.2	95	65	9	10	6.9	♌² a. ● p.
3	30.4	21.8	95	66	10	10	56.9	♌² a. ●² a. p.
4	31.8	22.6	94	92	8	8	42.7	●² a. ☇² p.
5	31.6	22	92	80	10	10	12.2	●² a. ● p.
6	31.9	21.9	96	78	10	10	------	≡ a.
7	31.9	22.8	96	78	10	10	------	♌ ≡ a. ☇² p.
8	33.1	22.4	94	72	8	8	------	♌ ≡° a.
9	33.2	21.8	96	65	8	8	------	♌² a.
10	31.8	21.5	92	67	8	10	------	
11	31.8	22.5	87	75	6	10	------	♌ a.
12	32.9	23.4	96	79	7	7	21.3	♌ ≡ a. ● p.
13	33.2	22.6	96	70	7	10	------	♌ ≡ a.
14	33	23	93	71	6	8	16.3	♌ a. ● ⊤² p.
15	33.2	23.9	92	66	8	6	------	♌ a. ⊤² p.
16	32.8	23.4	95	77	8	8	------	♌ ≡° a.
17	32	22.8	95	72	6	10	------	♌ ≡° a.
18	32.4	21.5	94	75	10	8	------	♌ ≡° a. ⊤² p.
19	32.8	22.2	95	55	8	10	------	♌ ≡° a.
20	31.7	21.9	94	87	7	8	6.6	♌ ≡° a. ● ⊤ p.
21	31.9	22.6	90	67	8	10	------	♌ a.
22	32.2	21.7	91	67	8	8	6.1	♌ a. ⊤² ●° p.
23	31.4	21.9	88	73	9	8	------	♌ a. ☇² p.
24	32.1	22.1	93	65	10	8	------	
25	31.5	22.7	97	73	7	10	------	
26	33.6	21.9	91	61	10	8	------	
27	33.9	22.5	92	68	8	9	------	♌ a. ☇² ⊤ p.
28	32.9	22	95	76	3	8	------	♌² a.
29	32.6	22.3	95	76	6	10	1.3	♌ ≡° a. ●° p.
30	33.7	22.3	97	78	5	8	9.7	♌ ≡ a. ●° p.
31	30.6	22.9	91	83	6	10	------	♌ a. ●° p.
Mean	32.4	22.4	93.6	72.3	7.8	8.9	------	
Total	------	------	------	------	------	------	180	

ISABELA, BASILAN.
[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	22	66	75	0	6	------	♌ a.
2	30.3	22	92	72	4	10	------	♌° a.
3	30.3	23	96	94	10	10	18.3	● ☈ a. d p.
4	30.3	23.4	96	79	10	10	------	⊤ ☇ p.
5	29.3	23.5	92	88	10	10	1.5	●° d ☇ p.
6	30.3	23.3	96	80	10	7	------	♌ a.
7	30.8	23.3	98	78	3	7	------	♌ a. ☇ p.
8	------	23	97	66	8	6	------	♌ a.
9	30.5	22	96	81	0	7	------	♌ a.
10	30.9	23.5	96	75	10	10	13.2	● a. p p.
11	30.8	24	96	85	10	7	------	♌ a.
12	30.3	24.3	96	87	8	10	------	
13	31.8	23.4	96	88	1	9	------	♌ a. ⊤ p.
14	30.9	22.8	96	78	2	10	------	♌ a. ⊤ p.
15	31.8	23.6	96	80	10	7	------	♌ a.
16	33.1	23	96	81	9	7	------	♌ a.
17	31.7	21.3	94	78	9	7	------	♌ a. ⌣ p.
18	31.2	21.9	96	91	2	10	1	♌ p a.
19	30.3	22.2	96	92	3	10	.3	♌ a. d ⌣ p.
20	33.1	21.8	96	78	3	10	------	♌ a. ⊤ d p.
21	33.8	22	96	81	6	10	------	♌ a.
22	32.8	22	96	71	4	7	------	♌ a. ○ p.
23	30.3	23	96	92	10	10	------	
24	31.3	22	96	78	9	10	------	
25	34.3	21.5	93	76	9	9	------	⊤ p.
26	34.8	22	98	------	5	7	------	♌° a.
27	32.8	22	97	77	4	10	------	♌ a ⊤ p.
28	34.8	21.5	96	69	2	8	3.8	♌ a. ● p.
29	31.3	22.5	92	75	10	9	------	♌° a.
30	35.1	22.3	96	------	10	10	------	⊤ p.
31	30.3	22.6	96	77	10	9	3	●° a.
Mean	31.7	22.6	95.6	80.1	6.5	8.7	------	
Total	------	------	------	------	------	------	41.1	

ZAMBOANGA.
[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	23	85	71	2	3	------	
2	30.6	23.6	86	70	8	9	------	
3	30.9	23.5	87	83	8	10	4.8	⊤ a. ☈ d p
4	29.2	22.5	90	88	7	9	1.3	●° ⊤ p.
5	30.5	23.5	87	75	8	10	.5	●° p.
6	29.3	24	88	77	9	8	------	
7	29.6	23	91	78	7	3	------	d a.
8	30.4	23.2	90	71	9	7	------	
9	29.6	23	86	74	8	8	------	
10	29.8	23.9	87	82	5	9	26.2	d ● ☇ p.
11	31	23.3	90	79	10	9	.5	p ☇ p.
12	31	23.8	87	80	8	9	------	☈ ○ p.
13	29.9	23.5	84	76	3	9	------	☈ a. d p.
14	29.6	23.4	90	78	8	9	------	d a. p. ☈ p.
15	29.9	22.5	90	73	9	6	------	☇ p.
16	29.9	22.9	83	78	10	7	------	
17	30.3	22.8	86	78	8	8	------	☈ p.
18	29.9	23.5	83	75	7	10	------	☇ a. d ☈ p.
19	31	23.2	84	81	9	9	------	☈ p.
20	30.8	23.4	88	74	10	4	------	
21	31.5	23.5	91	70	4	7	------	⊽ p.
22	30.1	23.8	86	68	6	7	------	☈ p.
23	27.8	24.5	80	90	10	10	.8	●° p.
24	29.9	22.9	84	75	10	10	------	○ a. p.
25	30.5	23.4	89	76	9	9	------	d p.
26	31.5	22.5	85	65	7	8	------	d p.
27	31.9	23.5	87	76	8	8	------	
28	32.5	23	85	68	4	8	------	
29	30.5	23.9	83	74	9	10	------	
30	31.7	23.7	82	69	10	9	3.3	
31	29.5	23.5	93	74	10	9	------	● a.
Mean	30.4	23.3	86.7	75.7	7.7	8.1	------	
Total	------	------	------	------	------	------	37.4	

DAVAO.
[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.2	21.5	96	64	5	6	48.5	●² ☈ p.
2	32.5	22.5	98	64	6	5	31	●² ☈ p.
3	31.6	21.5	97	71	5	6	39.9	●² ☈ p.
4	30.7	21.5	99	79	8	8	------	
5	32.1	21.4	97	67	7	5	------	
6	31.6	22.4	97	69	6	5	------	
7	32.5	22.3	96	67	6	5	------	
8	32.3	22.4	93	66	6	6	------	
9	32.3	23.4	96	62	8	6	38.6	●² ⊤ p.
10	31.8	23	96	74	8	7	39.4	☈ ●² p.
11	32.6	23	97	78	6	7	12.7	● ☈ p.
12	32.2	23.6	97	78	6	5	------	
13	31.7	23.2	97	69	7	7	38.6	●² ⊤ p.
14	31.7	22.5	97	67	6	5	2.5	● ⊤ p.
15	32.2	23.4	93	66	6	5	------	
16	31.7	22	96	66	7	6	24.9	☈ ●² p.
17	31.8	21.9	97	69	7	6	26.7	●² p.
18	31.8	23.5	96	70	6	5	31.7	☈ ●² p.
19	30.7	22.7	97	79	9	9	------	⊕ a.
20	30.2	23.1	97	77	8	7	19	d ☈ a. ● ⊤ p.
21	31.2	21.1	97	68	7	6	------	
22	32.2	21.1	98	67	5	7	18.3	● ⊤ p.
23	31.9	22.3	97	70	5	6	------	
24	31.7	22.3	98	73	5	5	------	
25	31.8	23.3	96	69	6	7	13.5	● p.
26	33	22.6	96	64	5	6	33.5	●² ☈ p.
27	32.4	22.5	96	65	6	5	------	⊤ p.
28	31.4	23.2	96	62	6	5	41.1	●² p.
29	33.7	22.4	98	62	6	5	38.9	●² p.
30	27.6	22.5	98	85	8	7	47.5	● a. p.
31	31.2	22.8	97	71	5	5	------	
Mean	31.8	22.5	96.6	69.6	6.4	6	------	
Total	------	------	------	------	------	------	546.3	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33	------	90	65	2	4	20.3	♃ a. ☐◪ ● p.
2	31.4	------	97	74	2	6	50.8	♃ a. ☿ ●² ☾ p.
3	31.6	------	92	70	10	6	------	●° ☾ p.
4	31.8	------	90	62	6	8	31.2	♃ a. ☾ ●² d p.
5	30.6	------	91	67	10	10	------	d ☾ p.
6	30.1	------	92	78	7	10	5.1	♃ a. ☐◪ ● p.
7	30.2	------	90	65	6	6	------	♃ a. ☾ p.
8	31.6	------	90	71	2	3	3.8	♃ a. ☾ ● p.
9	31.5	------	85	68	4	6	3.8	♃ a. ● p.
10	32.4	------	90	72	10	7	33	☐◪ ● p.
11	32	------	92	67	10	6	7.6	● a. p. ☾ p.
12	32.3	------	87	66	7	3	3.8	♃ a. ☐◪ ● p.
13	32.1	------	90	66	6	6	------	♃ a. ☾ p.
14	31.8	------	92	66	6	2	2	♃ a. ☐◪ ● p.
15	31.4	------	93	72	4	8	------	♃ a. ☾ p.
16	31.8	------	90	75	6	3	------	♃ a. ☿ ☋² p.
17	30.5	------	93	62	2	3	------	♃ a. ☋² ☾ p.
18	31.3	------	90	80	5	6	7.8	● a. p. ☾ p.
19	32	------	88	60	2	8	2	♃ a. ☐◪ ● p.
20	32	------	87	69	4	7	7.6	☐◪ ● p.
21	32.1	------	97	63	8	2	------	☋ ☾ p.
22	30	------	78	75	4	8	------	☋ p.
23	32.1	------	90	69	6	8	------	♃ a. d p.
24	31.2	------	93	69	4	6	2	● p.
25	30.8	------	90	72	2	4	------	♃ a.
26	32	------	92	67	6	2	------	♃ a.
27	33.1	------	90	64	2	5	------	☾ p.
28	32.3	------	90	68	6	4	------	♃° a. ☾ p.
29	33.6	------	92	58	5	3	------	☾ p.
30	29.6	------	90	71	4	8	------	d ●° ☾ p.
31	32	------	88	71	6	3	------	☽ ☾ p.
Mean	31.6	------	90.3	68.5	5.3	5.5	------	
Total	------	------	------	------	------	------	180.8	

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	20.9	90	64	3	3	------	♃° a. ☾ p.
2	32.7	22.5	91	64	2	7	5.6	♃° a. ● ☾ ☿° p.
3	32.2	22.6	93	67	10	7	2.5	☿° ●° ☾ p.
4	32.5	23.2	92	66	8	8	2	●° p.
5	32.9	22.5	84	70	7	9	------	☾° p.
6	33.9	21.8	92	72	1	9	------	♃ a. ● p.
7	34.4	22.2	90	60	4	5	------	♃ a.
8	34.6	23	90	60	0	7	31.7	♃° a. ☾ ● p.
9	33.4	23.7	92	64	8	7	------	☾ ● a. ☾° p.
10	33.7	22.5	93	64	2	8	33	♃ a. ● p.
11	32.8	23.7	93	64	4	9	------	⊕ ☾° p.
12	32.9	22.9	84	59	3	9	------	♃ a. ☾° p.
13	32.7	22.8	90	62	3	8	------	♃° a. ⊕ ☋ ☾° p.
14	33.5	22.4	89	60	8	3	------	♃² a. ☾ ♉ p.
15	33.7	21.9	89	70	4	8	------	♃² a. ☾ ♉° p.
16	33.2	21.4	89	61	5	7	------	♃ a. ☾ ☋° p.
17	34.3	21.8	92	59	7	5	.3	♃ a. ☿ d p.
18	33.2	23.3	91	72	8	10	65	●² ☐◪² p.
19	32.7	22	90	60	4	8	------	☿° ☾ ♉ p.
20	32.8	21.7	92	66	6	9	------	♃° a. ☿° ☾° ♉ p.
21	33.3	21.6	91	64	4	3	------	♃° a. ☿° ☾° p.
22	33.2	22.7	91	64	5	6	------	♃° a. ☾° p.
23	33.3	22.1	90	70	8	7	------	♃ a. ●° ☐◪° p.
24	33.2	22.7	93	72	6	10	5.1	d² ☿° p.
25	33.3	22.2	90	64	2	9	6.6	d ☾ ♉ p.
26	33.7	22.7	91	58	4	4	2.5	☿° ☾° ●° p.
27	34.2	22.8	90	60	4	4	------	☿° ☾ p.
28	34.3	24.4	88	58	4	4	.5	♃° a. d ☿° ☾² p
29	33.4	23.7	90	62	8	4	------	
30	32.3	23.1	90	70	4	8	1.3	d p.
31	33.4	22.6	90	66	5	4	1.8	
Mean	33.3	22.6	90.3	64.3	4.9	6.7	------	
Total	------	------	------	------	------	------	157.9	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.4	24.4	85	67	10	5	9.7	● a. ☾ p.
2	32.4	22.5	88	65	10	8	29.7	● a. ☽ ☾ p.
3	33	21.8	85	63	10	5	37.8	● ☐◪ a. ☾ p.
4	32.4	22	85	64	9	5	------	☾ p.
5	33.4	22.4	85	58	10	6	------	d a. ☽ ☾ p.
6	33.7	23.2	82	65	7	9	------	d a. ☽ ●° ☿ p.
7	------	24.2	90	75	5	6	------	♃ a. ☾ p.
8	34.4	22.4	87	62	8	7	------	♃ a. ☾ p.
9	33.9	23.8	87	67	6	5	------	♃ a. ☾ p.
10	33.7	23.7	88	62	8	5	------	♃ ☽ ⊕ a. ☾ p.
11	34.1	24.8	87	64	5	6	------	♃ a. ☾ p.
12	34.4	24.3	87	64	7	8	------	♃ a. ☾ p.
13	34.2	22.8	93	62	7	5	------	♃ a. ☽ p.
14	34.6	23.4	87	61	7	5	------	♃ a.
15	34.5	23.3	86	61	8	7	------	♃ a. ☾ p.
16	34.7	22.2	90	61	7	4	------	♃ a.
17	35.2	22.6	87	62	7	5	------	♃ a.
18	34.5	24.3	85	64	9	10	1.8	♃ a. ● ☾ p.
19	34.4	23.8	93	64	5	7	------	☾ p.
20	34	23.2	90	64	7	7	------	♃ a. ☾ p.
21	33.8	21.1	89	62	8	4	------	♃ a. ☾ p.
22	32.7	22.9	90	66	8	5	------	♃ a. ● ☿ p.
23	33	23	87	67	8	9	------	♃ a. ☿ p.
24	32.4	23.8	87	66	7	5	------	♃ a. ☾ p.
25	------	24.3	88	66	10	7	2.5	☌° a. ☾ p.
26	------	23.7	90	69	9	7	------	● a. ☿ p.
27	33.1	22.8	86	66	6	6	------	⊕ a. ☽ a. p. ☾ p.
28	32.7	23.9	90	66	8	7	------	☾ p.
29	------	23.4	88	66	7	7	------	☿ a. ☾ p.
30	35.2	24	91	64	9	6	------	☾ p.
31	------	23.8	86	70	9	5	1.3	● ☾ p.
Mean	33.8	23.3	87.7	64.6	7.8	6.2	------	
Total	------	------	------	------	------	------	82.8	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	23	96	64	3	7	------	♃ a. ☿ ☾ p.
2	30.7	23.5	96	71	8	8	.8	♃ a. d ☐◪ p.
3	30	23.6	94	71	10	8	6.9	♃ a. ☿ ●° p.
4	29.1	22.8	96	87	10	10	1	♃ a. ☿ d ●° p.
5	29.8	23	97	76	8	7	3	♃ ●° a.
6	31.1	24.1	95	66	9	8	------	♃ a. ☿ ☾ p.
7	32	24.4	92	69	9	7	------	♃ a. ☾ p.
8	32.3	24.4	93	67	6	5	------	♃ ⊕ a.
9	31.5	23.7	91	67	7	7	------	♃ a. ☐◪ ☾ p.
10	31.3	23.6	98	65	10	6	------	♃ a. ☾ p° p.
11	31.3	23.4	95	67	6	7	5.1	♃ a. ☿ ☾ ● p.
12	31.2	23.5	96	66	5	8	------	♃² a. ⊕ ☾ p.
13	31.2	23.4	96	64	7	7	------	♃² a.
14	31.3	23.1	94	62	5	4	------	♃ a. ☿ ☾ p.
15	31.5	23.1	95	60	6	7	------	♃ a. ☾ ☋ p.
16	31.5	23.6	95	66	8	7	------	⊕ a. p. ☿ ☾ ☋ p.
17	33	24.3	90	64	6	5	------	♃ a. ☾ p.
18	32.8	23.6	91	81	8	10	35.6	☐◪ ● p.
19	32.7	23.6	93	72	5	7	------	♃ ♁ a. ☾ p.
20	31	22.7	95	93	5	10	8.1	☐◪ ● a. p. ☋ p.
21	32.2	23.1	94	65	6	5	8.1	♃ a. ● ☋ p.
22	32.5	23.4	91	85	2	8	.5	♃ a. p p.
23	33.5	23.9	93	61	4	7	1.5	♃ a. ☿ ● p.
24	33.5	23.7	94	66	6	9	------	♃ ⊕ a. ☿ d° p.
25	32.2	24	91	72	8	9	1	♃ a. ☿ d° ●° p.
26	32.3	24.7	94	63	10	5	------	♃ a. ☾ p.
27	34.1	25.1	92	66	6	3	------	♃ a. ☿ p.
28	33	24.1	93	65	5	5	21.8	♃ a. ☐◪ ● p.
29	33.8	23.9	91	67	8	7	1.3	● a. p. ☿ ☾ p.
30	30.1	24.1	91	71	9	9	15.5	♃ ●° a. ● p.
31	32.5	24.5	92	66	8	8	------	♃ a. ☾ p.
Mean	31.8	23.7	93.7	69.2	6.9	7.1	------	
Total	------	------	------	------	------	------	110.2	

METEOROLOGICAL DATA, ETC.—Continued.

DUMAGUETE.

[$\phi = 9°\ 18'$ N; $\lambda = 123°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	25.2	85	76	5	9	------	
2	------	24.9	84	74	10	10	------	☾ ○² a.
3	------	24.8	97	70	10	9	------	☿ ≡ d a. ☾ a. p.
4	------	24.8	90	72	10	9	0.5	☐☌ a. ○ p.
5	------	24.4	85	81	10	10	------	☐☌ a. ☿ p.
6	------	23.4	85	73	10	10	------	♌ a. ☾ d° p.
7	------	23.4	85	63	10	8	------	☌ a. ☾ p.
8	------	23.2	91	61	3	4	------	♌ a. ◠° d² p.
9	------	24	90	73	9	9	------	♌ ○° a. ☾ a. p.
10	------	23.6	82	70	10	5	------	☌ a. ☾ ☿ p.
11	------	24.8	94	72	9	5	4.6	d a. ☿ ☾ p.
12	------	24.3	91	80	10	10	2.8	● ° a. ○² ☾ p.
13	------	24.6	84	77	10	10	------	☌ a. ◡° ☾ p.
14	------	23.9	82	71	10	2	------	♌ a. ☾ p.
15	------	24.1	87	62	9	7	------	♌ ☿ a. ☾ p.
16	------	24.4	78	66	10	8	------	
17	------	23.4	76	78	10	10	------	☾ a. p. ☿ d° ♁ p.
18	------	23.6	86	91	10	10	.3	☾ ☾ a. p. ○° ● ◡
19	------	23.7	85	74	10	10	------	○° ☿ a. ☌ ☾ p.
20	------	23.9	83	74	10	10	2.9	☿ ⊕² ○² ●° ☾ p.
21	------	23.4	85	78	10	8	------	♌° a. ☿ ♁² ☾ p.
22	------	23.4	87	81	10	9	.8	☿ a. p.
23	------	23.4	87	80	10	9	------	♌° ☿ a. ♁² ☾ p.
24	------	23.8	87	72	10	10	------	○² ☿ a. ☿ ☾ ◡ ♁
25	------	24.6	93	68	10	10	1.3	≡° a. ○ a. p.
26	------	24.4	97	78	10	10	------	● a. ○ a. p.
27	------	23.7	85	64	10	10	------	♌ a. ☿ p.
28	------	24	83	78	10	10	------	♌ a. ☿ ☾ p.
29	------	24.4	83	82	10	10	------	☿ a. ⊕ a. p. ☾ p.
30	------	25.1	88	81	10	10	.9	☿ ● a. ☾ p.
31	------	24.2	87	75	10	8	1.7	●° a. p. d ☾ p.
Mean	------	24.1	86.5	74	9.5	8.7	------	
Total	------	------	------	------	------	------	15.8	

YAP (Western Carolines).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.8	25.5	94	99	10	10	102.3	☐☌² ● a. ☾° d p.
2	26	24.5	98	100	10	10	223.5	☾° ●² a. p.
3	26.8	24.8	100	96	10	10	207.5	☾° ●² a. p.
4	29.5	24.3	90	88	10	10	27.1	● a. p. d p.
5	30.4	25.2	87	78	10	5	12.2	d a. p. ◠° ● p.
6	30.4	25	88	75	9	7	------	♌ a.
7	31.4	24.7	94	81	3	7	------	♌ a.
8	31	25.2	91	77	8	7	------	♌ a.
9	30.9	23.6	90	79	9	9	------	♌ a.
10	31.3	24.9	89	71	9	6	.8	♌ a. ○ p.
11	31.1	25.4	92	91	10	9	24.6	●° a. p.
12	27.4	23.5	100	98	10	10	78.2	● a. p.
13	27.3	24.5	98	100	10	10	129.7	☾° ●² a. p.
14	27.9	25.1	------	83	10	10	14.4	☾° a. ● p.
15	28.4	24.8	------	85	10	10	12.7	● a. ◠° p.
16	30.2	24.5	91	77	10	10	------	d° a. p.
17	30.1	24.2	91	76	8	8	------	♌ a. ♁ p.
18	31	25.8	94	72	9	4	------	♌° a. d° p.
19	32	24.2	95	70	3	4	3.6	♌² a. ☾° ● p.
20	30.6	24.2	91	76	3	5	1	◠° ♁° ●° p.
21	30.3	24.6	97	77	6	7	4.1	d° a. ● ♁° p.
22	30.9	24.9	94	77	9	7	------	◡° ♁² p.
23	31	24.7	93	75	3	7	------	♌° a. ◠° d° ♁° p.
24	31.6	25.2	92	70	5	4	------	♌ a. d° ◠° ☾° p
25	31.6	24.9	94	72	6	4	------	♌² a. ◡° ♁² p.
26	32	24.6	92	85	3	8	------	♌² a. d° ☾° ♁° p.
27	32	25.5	92	70	2	2	4.6	d°a. ○° ◠° ● ☾° p.
28	31	25.5	91	75	7	6	32.6	● a. p. ☾° p.
29	30.5	24.9	93	82	9	6	.5	●° a. d° p.
30	30.7	25.6	94	79	5	3	------	◠ d a. p.
31	30.7	25.5	89	77	4	8	------	d° a. ☾° p.
Mean	30.2	24.8	92.9	81	7.4	7.2	------	
Total	------	------	------	------	------	------	879.4	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	23	92	83	10	8	------	
2	31.7	23.5	91	77	10	9	------	
3	30.5	23.4	88	84	10	10	16.3	● ☿² ☾² p.
4	31.6	24.1	89	88	10	10	56.1	●² ☐☌² p.
5	32	23.6	95	75	10	10	------	
6	31.4	24.4	94	84	10	8	------	☾ p.
7	29.5	25	95	82	10	10	------	☐☌² p.
8	30.8	24.2	94	80	10	10	------	○ ☐☌² p.
9	30.5	25	92	87	10	8	------	
10	30.6	24.3	90	78	10	10	------	☿° ☐☌² p.
11	32	24.1	85	81	10	10	24.4	☿² a. ● ☐☌ p.
12	31.2	23.1	85	83	10	10	------	☿° ☿² ☾² ◡° p.
13	31.5	23.7	83	73	10	10	------	♌ a. ☾ ◡² p.
14	31.9	23.8	87	76	10	6	------	☿ ☾ ◡ p.
15	31 2	24.2	90	79	10	10	------	
16	31	23.6	92	80	10	6	------	
17	31.4	25.5	90	76	10	8	------	
18	32	24	92	81	10	10	------	☐☌² ♁ p.
19	32	24.1	91	83	10	10	------	⊕ ☐ a. ☿² ◡² ☾ p.
20	31.4	23.4	93	83	8	10	------	☌ ☿² a.
21	29.8	24	88	78	10	10	------	♌² a.
22	30.5	24.3	88	75	8	7	------	◡ ♁² ☾² p.
23	34	24.2	88	81	10	8	10.7	◡ ☐☌² p.
24	32	24.2	92	84	10	7	------	● ☐☌² a. d° ♁ p.
25	31.1	24	91	75	10	10	------	☿ d a.
26	30.6	25.5	92	80	10	10	------	
27	30.7	25.4	95	74	10	7	------	☿° d° p.
28	32.6	25.3	94	75	10	9	------	
29	32.6	25.5	85	76	8	9	------	
30	29	25	89	83	7	10	25.1	d ● a. p.
31	30.6	23	91	81	10	10	------	
Mean	31.3	24.2	90.4	79.8	9.7	9	------	
Total	------	------	------	------	------	------	132.6	

SAN JOSE BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.9	23	85	58	4	7	2.5	♌ a. ● ☾ p.
2	32.3	23.2	86	80	10	10	6.6	● ☿ ☾ p.
3	32	23	87	68	10	9	39.9	☐☌ ●² ☾ p.
4	32.3	23	87	68	10	2	.5	♌ a. ●° ☾ p.
5	32.6	23.6	88	66	10	8	------	☿ p.
6	32.4	23	87	79	3	10	3.8	☿ a. ● p.
7	32.5	26.9	85	72	10	8	3.8	● ☐☌ p.
8	32	24.2	92	74	4	7	2.3	● a. p.
9	32.4	23.3	90	70	4	4	11.9	♌ a. ☾ p.
10	32	23.9	93	78	10	10	------	● a. p. ☐☌ ◠ p.
11	32	24.3	91	70	10	3	2	◠ ● a. ☿ a. p.
12	32.5	23.6	87	81	2	10	------	☿ d p.
13	32.7	23.1	88	68	1	2	------	
14	33.3	23.8	86	63	4	3	2.8	● ☿ p.
15	32.8	22.5	78	64	3	3	------	
16	33.2	23.6	84	69	4	10	------	☾ p.
17	34.6	23.8	86	66	6	4	------	☾ p.
18	33.6	23.2	84	64	2	4	.5	●° p.
19	33.5	23.7	87	70	2	8	1.3	☿ ◡ ☾ p.
20	33.8	23.3	86	72	8	10	------	●° ☐☌ a. ♁ ☾ p.
21	34.3	23.7	88	69	10	10	------	
22	33.9	23.7	85	64	4	10	------	☿ p.
23	32.9	23.5	86	75	10	10	18	● ☐☌ p.
24	32	23	92	82	10	10	15.2	
25	31.6	23.6	91	90	10	10	31.7	♌ a. ☐☌ p.
26	31.6	23.4	91	74	10	10	------	
27	32.3	23	90	78	8	10	2.8	d° a. p. ☾ p.
28	32	24.1	90	80	10	10	3.8	●° ◠ a. d p.
29	31.8	23.8	89	76	10	10	------	
30	31.8	24	89	83	10	10	7.1	d ● ☿ ☾ p.
31	32	23.6	92	85	10	10	5	● ☿ p.
Mean	32.7	23.6	87.7	72.8	7.1	7.8	------	
Total	------	------	------	------	------	------	161.5	

METEOROLOGICAL DATA, ETC.—Continued.

CUYO.

[ϕ=10° 51′ N; λ=121° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	8	7	1.3	☾ p.
2	------	------	------	------	7	9	30.2	●° a. ●² p.
3	------	------	------	------	9	8	.8	● ⌐◪ a. ☾ p.
4	------	------	------	------	7	5	------	
5	------	------	------	------	8	7	------	☾ a.
6	------	------	------	------	7	8	------	☾ p.
7	------	------	------	------	8	7	------	☾ p.
8	------	------	------	------	8	8	2	☾ p.
9	------	------	------	------	9	7	------	●° a. ☾ p.
10	------	------	------	------	8	6	------	
11	------	------	------	------	8	7	------	
12	------	------	------	------	7	8	1	⊤ ●° a.
13	------	------	------	------	8	7	------	
14	------	------	------	------	8	5	------	
15	------	------	------	------	7	7	------	
16	------	------	------	------	8	9	9.2	●° a. ⊤ a. p. ☾ p.
17	------	------	------	------	7	8	------	● a.
18	------	------	------	------	7	8	11.2	● a. ⊤ ∪ ☾ p.
19	------	------	------	------	7	6	------	⊤ a.
20	------	------	------	------	8	9	------	◑ ⊤ a. ☾ ∪ ⊍ p.
21	------	------	------	------	9	9	------	⊤ a. p.
22	------	------	------	------	9	10	46.3	☾ a. ●² a. p.
23	------	------	------	------	9	9	------	☾ p.
24	------	------	------	------	9	9	29	● ⌐◪ p.
25	------	------	------	------	10	10	2.8	⊤ a. ● a. p. d p.
26	------	------	------	------	9	10	------	d p.
27	------	------	------	------	9	10	------	d p.
28	------	------	------	------	9	9	.8	●° p.
29	------	------	------	------	9	8	------	
30	------	------	------	------	8	8	------	
31	------	------	------	------	9	8	213.9	●² a. p. ⌐◪ p.
Mean	------	------	------	------	8.2	7.9	------	
Total	------	------	------	------	------	------	348.5	

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m	Relative humidity. 2 p. m	Cloudiness. 6 a. m	Cloudiness. 2 p. m	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.3	22.7	95	80	8	9	22.4	● a. p.
2	30.9	21.5	97	83	5	7	13.4	≡ a. ● a. p.
3	30.6	22.9	97	71	5	8	7.9	≡ a. ● ☾ p.
4	30.2	23.3	97	69	5	8	1.8	≡ ☊ ⊕ a. ☾ ● p.
5	30.5	22.6	97	64	10	9	------	≡ a. ☾ ⊤ p.
6	31.3	23.8	97	63	10	10	------	☾ p.
7	------	22.4	97	55	8	5	------	≡ ☊ a. ☾ p.
8	33.3	22.8	97	54	2	8	------	☊ a. ⊤ ☾ p.
9	31.6	23	90	71	2	5	------	☊ a. ☾ p.
10	31.5	23.7	96	68	7	4	------	☊ a. ☾ p.
11	31.2	23.3	97	65	8	4	------	≡ ☊ a. ☾ p.
12	31.4	23.2	96	65	3	6	------	≡ ☊ ◯° a. ☾ p.
13	30.9	22.7	96	65	4	3	------	≡ ☊ a.
14	30.6	23.1	95	65	3	2	------	≡ ☊ a.
15	30.8	22.3	96	65	5	8	9.9	≡ ☊ a. ● ⊤ p.
16	32.5	21.8	97	57	4	8	------	≡ ☊ ◯ a. ∪ p.
17	32.7	22.8	96	53	9	8	------	≡ ☊ a. ⊤ p.
18	30.9	22.9	93	91	10	10	14.2	≡ ☊ ● a. ⌐◪ p.
19	31.2	22.8	97	74	6	7	------	◯ a. ⌐◪ ◯° ∪ ☾
20	30.8	22.3	97	74	2	9	------	☊ a. ⊤ a. p. ∪ p.
21	30.8	22.9	96	68	5	4	------	⊤ ☊ a.
22	30.8	23	96	71	7	8	.5	≡ ☊ a. ⊤ ∪ ●° p.
23	31.2	23	95	68	5	4	------	≡ a. ⌐◪ p.
24	31.5	22.7	95	77	4	9	1.3	◯ a. ●° ⊤ ⊍ ☾ p.
25	31.2	23.1	98	72	6	8	11.5	≡ ☊ a. ● ⌐◪ p.
26	32.2	22.9	97	69	6	8	------	≡ a.
27	34.5	23.2	97	56	6	5	13.7	≡ ☊ a. ●² ⊤ ☾ p.
28	32.3	23.6	98	71	4	9	35.1	≡ ☊ a. ⌐◪ p.
29	31.4	23.8	97	73	8	9	------	●° ≡ a. ☾ p.
30	30.1	23.8	97	84	8	9	41.6	≡ ☊ a. ● a. p.
31	29.8	23.4	98	83	10	10	5.6	⌐◪ a. ● a. p. ☾
Mean	31.3	22.9	96.3	69.2	6	7.1	------	
Total	------	------	------	------	------	------	178.9	

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	24.4	94	------	8	8	------	
2	33	24.5	98	------	8	7	------	
3	31.6	24.6	97	------	8	7	3.8	
4	31.4	25	98	------	8	9	1	
5	31.2	26	94	------	9	10	------	
6	30.6	26.6	97	------	10	10	------	
7	32.8	26.6	97	------	10	9	------	
8	32.8	26	99	------	10	7	------	
9	32.6	25.2	98	------	10	9	12.7	
10	32	25.2	94	------	8	9	------	
11	33.6	24.6	98	------	9	8	------	
12	33	24.6	98	------	8	8	------	
13	32.5	24.6	98	------	8	7	------	
14	32.6	24.2	99	------	8	7	------	
15	32	24.6	97	------	8	8	------	
16	31.5	23.8	98	------	9	10	8.6	
17	30.8	26.5	98	------	9	9	20.3	
18	30.6	24.8	98	------	8	9	51.6	
19	32.4	23.8	98	------	8	8	------	
20	31.8	25.2	97	------	7	9	2	
21	32.5	23.8	98	------	6	6	------	
22	33.2	25.2	98	------	8	5	------	
23	32.2	25.2	98	------	8	9	36.1	
24	32.4	24.5	98	------	9	9	1.6	
25	32.8	25.5	99	------	9	9	------	
26	32.5	25.5	96	------	9	9	------	
27	33	26.6	97	------	7	6	1.5	
28	32.5	26.2	98	------	8	8	------	
29	32	25.8	96	------	9	9	11.4	
30	32.6	24.4	98	------	9	8	5.6	
31	31.6	23.6	98	------	10	9	6.4	
Mean	32.2	25.1	97.4	------	8.5	8.2	------	
Total	------	------	------	------	------	------	162.6	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	25.7	83	63	6	3	2.5	☾ ●° p.
2	32.5	25.4	88	69	8	3	------	
3	31.9	24.5	83	64	9	5	5.3	p a. ⊤ p.
4	31.8	24	96	62	7	5	34	p a. ●² ⌐◪ p.
5	30.4	23.7	98	69	6	10	3	●° p.
6	32.3	24.7	88	58	10	10	------	
7	32.5	26.8	79	65	9	7	1.3	☾° p.
8	32.4	25.7	85	67	10	10	5.6	p a. p. ☾ p.
9	32.4	24.6	92	66	10	6	------	☾ p.
10	31.1	24.8	92	63	6	5	5.8	● a.
11	32.3	23.9	97	65	8	7	3	●° ☾° p.
12	32.9	24.3	92	66	5	7	------	
13	32.9	24.3	92	63	8	4	------	☾ p.
14	33	23.6	88	64	3	4	------	⊤ p.
15	33.6	24	88	52	3	6	------	
16	33.5	23.3	95	68	4	9	1	d ⌐° ●° p.
17	32.5	25.1	85	61	10	10	------	⊤° p.
18	34.4	25.3	91	60	7	6	5.1	● ☾ p.
19	34	25.1	89	67	9	3	------	⌐◪ p.
20	34.1	24.7	91	65	10	8	------	⊤ a. p. ☾ p.
21	33.5	24.5	92	90	7	10	13.5	●° a. ⊤ ● p.
22	32.6	24	97	68	10	8	------	☊ a. ☾ p.
23	32	24	87	70	7	9	------	☊ ⊤ a. ⌐◪ p.
24	33.6	25.7	82	62	8	6	4.6	● ☾ p.
25	31.9	24.4	77	83	10	10	1.3	☾° p a. d p.
26	30	23.6	83	92	9	10	27.9	☾° ● ⊤ a. ●° p.
27	33.4	24.1	80	70	8	8	4.3	p ⌐◪ p.
28	32	24.7	92	85	9	9	------	p p.
29	33.2	24.6	90	64	10	5	------	☾ p.
30	31.5	23.9	95	75	10	6	3.6	p a. ☾ p.
31	32.4	24.4	90	66	10	6	------	p° a. ⌐◪ p.
Mean	32.5	24.6	88.9	67.8	7.9	6.9	------	
Total	------	------	------	------	------	------	119.1	

METEOROLOGICAL DATA, ETC.—Continued.

LAOANG.
[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	23.4	90	79	8	7	3.8	● a.
2	30	23.2	93	75	6	8	.8	● a. p.
3	30.2	23	92	78	4	8	3.8	● a.
4	30.1	23.2	95	73	7	8	18.9	● a. p.
5	30.6	22.2	95	72	8	9	.3	
6	29.7	25.1	83	78	10	10	2.8	● a.
7	32.6	24.2	86	63	9	8	------	
8	33.1	23.9	91	64	10	7	------	
9	32.3	23.5	92	72	8	7	------	
10	31.4	23.4	93	77	8	6	------	
11	30.7	23.4	87	73	8	5	------	
12	30.7	22.9	90	72	5	8	------	
13	30.8	22.3	90	69	6	8	4.1	● p.
14	31.1	22.9	88	67	7	4	1	● a.
15	30.7	22.3	97	68	6	6	.3	
16	31.7	22.4	92	68	7	8	------	
17	31.8	23.7	93	68	7	8	.3	●° a. ⌣ p.
18	31.6	23.6	94	------	4	9	------	⌣ p.
19	32.1	22.8	92	66	6	7	2	
20	32.1	22.4	88	85	6	9	58.4	●² p.
21	32.1	22.2	91	69	4	5	------	
22	30.1	23.2	93	89	7	6	11.7	● p.
23	30.7	23.1	89	78	4	8	7.9	● p.
24	31.4	23.4	97	76	8	7	.3	
25	32.2	23.8	92	93	6	9	12.2	● a.
26	32.1	23.9	93	72	7	8	------	
27	32.3	23.9	97	76	3	9	------	
28	32.4	23.8	86	85	8	9	3.8	● a.
29	33.4	24.6	94	69	8	10	------	
30	31.8	24	88	62	8	8	6.6	
31	29.5	23.9	98	84	10	9	1	● a. p.
Mean	31.3	23.3	91.6	74	6.9	7.7	------	
Total	------	------	------	------	------	------	140	

GUBAT.
[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	25	97	------	9	4	6.1	d a. ● a. p.
2	32.5	23.4	91	72	10	6	3.3	● a. p.
3	31.9	23.4	92	72	7	5	4.1	● p.
4	32	23.4	93	73	2	7	5.3	● p.
5	30.4	23.3	98	79	9	7	------	◯ d p.
6	31.6	24	90	79	7	7	------	
7	32	23.3	96	75	8	7	------	d ⊤ p.
8	32.7	24	85	73	5	7	------	◟ p.
9	31.5	23.3	97	82	7	4	------	◟ p.
10	33.9	23.4	92	------	5	4	------	⊤ a. p.
11	32.8	23.5	97	70	3	5	.3	
12	33	24.7	95	------	7	5	------	● a.
13	33.4	23.4	98	------	6	4	------	
14	33.3	22.5	98	------	3	4	------	
15	32	23.5	96	75	8	5	------	
16	33.2	21.8	95	69	8	7	------	
17	30.9	23.9	95	80	8	7	3	p a. ⊤ a. p.
18	33.3	22.9	90	------	5	7	------	♌ a. ● ◟ p.
19	32	23.3	89	75	6	5	------	◸◹ a. p.
20	31.5	23.5	98	89	6	7	.8	p a.
21	32.8	22	90	------	4	7	------	
22	32.4	22.8	89	70	7	4	------	
23	33	20	88	------	5	4	------	♌ a. ◟ p.
24	31	22.5	94	82	9	10	2.3	● p.
25	31.5	23	97	83	8	9	1.8	d a. ● p.
26	32.6	23.6	97	------	8	7	------	◟ p.
27	34	24	90	------	7	5	------	◟ p.
28	33.9	23.9	98	77	6	5	------	
29	32.5	25.5	95	------	7	5	------	
30	34	25	98	------	8	6	------	
31	32.2	23.3	98	------	8	7	------	d a.
Mean	32.5	23.4	94.1	76.4	6.6	5.9	------	
Total	------	------	------	------	------	------	27	

SUMAY, GUAM (Ladrones Islands.)
[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.8	26.2	81	71	3	9	------	
2	29.8	25.8	82	59	3	8	3	
3	29.2	24.4	87	68	3	9	3.8	
4	29.6	24	91	72	8	8	2.5	
5	29.6	25.2	82	74	7	10	3.8	
6	29.8	25.6	84	64	1	5	------	
7	29.4	25.6	84	70	1	6	------	
8	29.4	24.2	84	70	10	10	3	
9	29.6	24.2	84	65	10	10	.5	
10	29.2	25.2	84	71	10	9	4.6	
11	29.2	25	89	76	10	10	2	
12	30	25.2	84	71	6	3	6.4	
13	28	23.8	92	83	10	10	8.4	
14	28	23.2	87	80	10	10	.8	
15	------	24	91	91	10	10	106.7	
16	28	23	84	95	10	10	73.7	
17	29.6	22.8	87	64	10	4	------	
18	30	23.6	84	68	10	6	------	
19	30.4	23.8	84	60	10	10	------	
20	30.2	23.8	89	67	8	6	.5	
21	30.4	25.6	84	70	4	8	------	
22	29.8	23.6	84	61	7	4	------	
23	30	25.6	84	67	1	3	3.8	
24	29	23.8	92	84	4	10	12	
25	30	23.8	85	71	10	10	.8	
26	29.8	24	84	68	5	6	------	
27	30.6	23.8	83	71	10	10	------	
28	30.6	23	84	66	8	6	3.8	
29	30	23.8	84	71	6	5	.8	
30	29.6	25.6	84	71	2	10	2.8	
31	30.6	24.8	84	70	2	2	------	
Mean	29.6	24.4	85.4	71.3	6.7	7.6	------	
Total	------	------	------	------	------	------	243.7	

CALAPAN.
[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.4	22.5	89	64	5	2	0.5	⊤ ◟ p.
2	32.4	23.5	95	57	8	3	24.4	◯ a. ⊤ ●² ◟ p.
3	32	24.5	92	63	8	7	------	◟ p.
4	32	24	92	62	8	4	.3	⊕° p ◟ p.
5	32.2	23.5	91	67	10	10	------	⊤ ◟ a. p.
6	30.8	21.8	92	78	10	10	------	
7	34.1	22.9	91	73	10	9	------	◟ p.
8	31	23	88	79	10	10	------	◟ p.
9	31	22.8	88	75	10	8	------	
10	32.1	23	91	66	8	3	------	♌ a.
11	32.1	23.5	87	69	4	5	------	
12	33	23.5	89	74	10	10	------	⊤ ◟ p.
13	33.1	23.4	90	50	8	5	------	
14	33	23.5	94	56	8	3	------	◯² a.
15	32.7	22.7	90	59	6	3	------	◟ p.
16	31.1	23.5	91	73	10	8	------	◟ p° a. ⊤ ⊂ ◟ p.
17	32.2	22.6	90	73	10	9	------	◸◹ p.
18	32.1	22	92	77	6	9	------	♌ a. ◸◹ ⊂ p.
19	32.9	22.5	87	80	8	9	------	◸◹ ⊂ ⌣ p.
20	32.4	22.6	90	85	9	10	------	◸◹ a. p. d ⊂ ⌣
21	32.1	22.5	90	74	10	10	9.1	◸◹ ● ⌣ ⊂ p.
22	31.8	22.5	90	65	10	10	------	◸◹ ⊂ ⌣ p.
23	32.5	22.9	91	76	10	10	7.6	◸◹ ● p.
24	32.6	23	92	68	10	10	6.4	d° ⊤ ◟ ●° p.
25	26.6	24	95	94	10	10	14.3	d° a. p. ●° p.
26	27	23.4	98	93	10	10	11.7	d° a. p.
27	32.2	------	93	72	4	10	1.8	p a. p.
28	31.5	23.6	96	72	10	10	6.9	p a. ● p.
29	32.7	23	95	72	7	9	.5	⊤ p p.
30	31.3	23.1	92	82	9	10	2.5	◸◹ a. p. p p.
31	32	22.6	89	78	9	10	16.5	●° a. ⊤ a. p.
Mean	31.8	23.1	91.3	71.8	8.5	7.9	------	
Total	------	------	------	------	------	------	102.5	

METEOROLOGICAL DATA, ETC.—Continued.

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	22.4	97	69	3	6	0.8	●° ☾² d a. ↘² p.
2	31.7	22.5	96	73	7	6	1.8	☾° ●° p a.
3	31.2	22.1	97	73	2	7	.8	♌ a. ●° ↙ p.
4	32.2	21.7	96	77	6	9	.8	☋ ♌ ☾ a. p p.
5	32.2	22.4	95	60	10	10	26.2	
6	29	23.9	92	82	10	10	6.4	● d a. ↙² p.
7	32.5	25.5	82	71	10	8	------	↙² p.
8	32.4	24.7	92	67	7	7	------	♌ a. ∞ p.
9	32.7	23.7	96	75	6	4	------	♌ a. ◪ d° p.
10	31.4	23.2	95	79	6	5	------	♌ a.
11	30.9	23.2	98	75	3	6	------	♌ a.
12	30.3	22.5	95	67	7	7	------	♌ a.
13	31.5	21.9	96	65	5	6	------	♌ d a.
14	31.7	21.5	96	74	2	8	11.7	♌ a. d² ● p.
15	30	21.3	96	72	7	8	.8	●° a. ☋ ∪ p.
16	32	20.5	93	52	7	7	------	♌ a. ☋ ∪ p.
17	32	22.5	95	70	9	9	------	┬ ↘ p.
18	32.7	23	95	71	6	8	.3	┬° a. ◪ ↙² d p.
19	31.9	23.5	96	70	7	5	3.3	d a. ┬ p p.
20	32.1	23.3	96	77	6	8	------	┬ a. p. ↘ p.
21	31.2	23.7	94	75	3	5	8.9	↘ p.
22	31.2	23.8	97	72	10	4	.7	● a. d a. p. ↘ p.
23	31.4	24.6	84	75	7	8	------	↙ p.
24	31.2	24.5	94	75	9	7	------	d° ↙ p.
25	31.8	25.2	94	76	9	6	------	d° ┬ ↘ p.
26	32.5	24.4	91	67	8	9	------	↙ p.
27	33	25.5	88	73	7	4	------	♁ ↙ p.
28	33	25	91	74	7	8	------	☋ ∪ a. ↘ p.
29	33	25	92	69	10	6	------	↙ p.
30	31.6	23	93	73	8	8	------	↙ d° p.
31	32	24.2	87	72	10	9	------	d° a. ┬ ↙ p.
Mean	31.7	23.4	93.5	71.6	6.9	7	------	
Total	------	------	------	------	------	------	62.5	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	21.1	96	77	3	8	13.5	d ● p.
2	32.4	20.7	98	83	3	8	2.5	●° p.
3	33.1	20.8	98	76	6	8	.3	● p.
4	32.4	21	99	66	5	7	------	
5	31.9	21	97	61	8	9	13.7	● p.
6	30.8	23.5	95	69	10	10	------	● a.
7	31.7	24.3	93	69	9	9	------	
8	32.7	25.4	89	72	8	8	------	
9	34.2	23.9	95	69	9	7	------	
10	34.4	22.6	98	61	5	8	------	
11	34	22.1	98	73	3	8	------	
12	33.6	21.6	97	71	8	8	------	
13	33.2	20.8	96	61	7	8	------	
14	33.5	20.9	98	63	2	5	------	
15	33	19.8	98	67	3	7	------	
16	33.5	17.2	94	68	7	8	------	
17	32.5	23	97	65	8	9	2.5	
18	34.3	------	95	67	9	8	------	p a.
19	34.2	------	93	62	7	9	------	┬° a.
20	33.4	21.5	93	75	8	8	4.4	p a. p. ┬° p.
21	34.4	20.2	96	81	7	9	------	┬° p.
22	35.2	21.3	96	63	7	8	------	◪ p.
23	34	22.3	100	69	9	8	3.	≡ a.
24	34	22.9	92	70	7	8	34.7	● a. p. ◪ p.
25	32.2	23	95	78	9	9	5.1	● p.
26	31	24.2	95	77	10	10	12.4	● a. p.
27	32.6	24	95	74	8	8	------	
28	33.5	23.3	93	70	9	8	4.3	◪ p.
29	33.7	22.7	97	74	9	8	------	● a.
30	35.2	22.8	98	86	8	9	------	
31	33.9	22	97	84	10	10	.3	d p.
Mean	33.3	22.1	95.8	71	7.1	8.2	------	
Total	------	------	------	------	------	------	96.7	

BATANGAS.[1]

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35.8	23.7	90	43	3	4	------	
2	34.3	23.6	88	69	4	6	------	┬ p.
3	33.6	23	92	84	3	7	21.9	● p.
4	33.3	22.2	96	61	3	7	------	
5	32	22.1	95	68	6	7	.8	┬ d p.
6	33.4	22.3	95	62	6	7	------	○ p.
7	34	26.7	86	59	7	8	------	
8	33.2	26.8	84	59	7	7	------	
9	33.5	23.7	93	63	6	7	------	○ p.
10	33.8	23.1	95	61	6	3	------	
11	33.9	23.3	91	57	6	4	------	
12	34.	24.1	93	60	3	7	------	
13	34.2	23.9	92	56	4	6	------	
14	34	23.8	91	54	5	7	2.8	● a.
15	34.3	23	93	56	2	5	------	
16	32.1	23.2	93	72	10	7	14.7	● a.
17	33.8	24.3	96	64	7	6	------	┬ a.
18	34.1	23.8	95	62	5	7	------	
19	33.8	23.7	92	59	4	6	------	┬ p.
20	31.3	23.9	93	78	5	7	------	┬ p.
21	34.5	23.7	94	64	6	7	------	┬ ∪ p.
22	35.3	23.3	97	57	6	6	------	┬ p.
23	34.8	23.7	92	58	6	7	------	
24	32.9	24.7	92	65	7	7	4.1	┬ d p.
25	28.1	23.9	97	87	9	10	13.7	● a. p.
26	27.5	23.3	97	95	10	10	9.9	● p.
27	31.2	22.4	97	72	7	7	------	
28	32.8	23.7	97	70	6	7	36.6	d a. ● p.
29	32.4	22.4	97	72	5	7	------	
30	33	22.8	97	62	6	6	------	
31	29.9	23.6	95	88	5	7	12.2	● a. d p.
Mean	33.1	23.6	93.4	65.7	5.7	6.6	------	
Total	------	------	------	------	------	------	------	
							116.7	

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	22	97	60	6	7	------	♌ ≡ a. ┬° p.
2	31.4	22.2	97	60	7	8	------	≡ a. ┬° p.
3	31.7	22.2	97	59	5	7	------	≡ a.
4	31	22.5	98	61	5	5	------	≡ a.
5	30.9	22	98	60	7	8	------	↙ p.
6	31.9	22.2	97	59	7	8	------	┬° p.
7	31.7	22	97	60	5	8	------	≡ a. ┬° ↘ p.
8	32.1	22.2	97	59	7	6	------	≡ a.
9	32.3	22.1	98	58	2	3	------	
10	31.4	22.1	95	60	3	8	------	♌ ≡° a. ┬° p.
11	31.8	22	97	60	9	7	------	≡ a. d p.
12	31.9	22.1	97	59	6	8	------	♌ ≡ a. ┬° p.
13	31.8	22	98	60	7	7	------	≡ a.
14	32.1	22.1	97	59	5	9	------	≡ a. ┬° p.
15	32.2	22.2	97	64	7	8	------	≡ a. d ┬° p.
16	31.3	21.9	97	60	4	8	------	≡ a. ┬° p.
17	31.7	22.2	97	60	7	9	------	≡ d a. ┬° p.
18	30.8	21.8	96	62	9	10	19.8	♌ ┬° ● a. ┬ p.
19	31	21.9	96	61	7	9	29.2	≡° a. ◪ ☾² ● ◠ p.
20	28.6	21.4	98	66	6	8	28.2	● ┬² p.
21	28.3	21.1	97	65	8	9	14.7	♌ ≡ a. ┬² ● p.
22	28.2	21	97	66	7	8	29.5	♌ ≡ a. ● ┬² p.
23	28.8	21.3	96	63	9	9	------	≡° a. d ◪ p.
24	28	20.9	98	68	7	8	21.8	♌ ≡ a. ● p.
25	26.8	20.3	98	71	9	10	16.8	● a. p.
26	26.6	19.6	97	70	10	10	49.5	●² a. p ┬° p.
27	27.6	20	97	70	7	9	9.7	♌ a. ● p.
28	27.2	20.1	98	70	5	7	14.	≡ a. ● p.
29	27.6	20.3	98	69	6	8	6.9	● p.
30	28.4	20.4	98	67	8	9	------	♌ ≡ a. d ┬² p.
31	28	20.2	98	69	9	10	3.3	p° a. ● p.
Mean	30.1	21.5	97.2	63.1	6.6	8	------	
Total	------	------	------	------	------	------	243.4	

[1] The minimum temperature, as recorded at this station, seems to have been 1.3° C too low since April 1908. The readings of the present month are corrected.

METEOROLOGICAL DATA, ETC.—Continued.

STA. CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.9	22.9	91	57	7	3	------	☽ a. ☾ p.
2	33.6	23	88	56	6	5	------	☌² a. ☾ p.
3	33.6	22.3	96	54	6	4	------	☌ ≡° a.
4	32.8	21	95	58	4	6	------	☌²≡ ☽° a. ☁ ☾ p.
5	33.3	22	97	70	10	9	1.5	☌² ≡ a. p ☐◹ p.
6	33.7	21.4	97	60	8	10	3	☌² a. ○° p. ☐◹ p.
7	34.9	22.3	91	62	9	8	2	≡ a. p ☐◹ p.
8	33.7	23.4	96	63	10	10	------	☌² ≡ a. ○° ☾ p.
9	34.5	22	95	50	10	9	------	☌ ≡ a. ○° p.
10	34.7	21.5	91	45	8	2	------	☌ ≡ a.
11	34	22	92	60	8	5	------	☌° ≡ a. ∞ ☐◹ p.
12	34.9	23.7	90	51	8	6	------	☌ ≡ a. ☐◹ a. p.
13	34.7	22.5	92	51	6	3	------	☌ a. ☾ a. p.
14	34.8	23.2	84	43	7	2	------	☾ ☊ a.
15	34.9	22.3	84	53	1	6	30	☌ ≡ a. ☾ p.
16	33.6	23.1	98	67	10	7	5.1	● ² a. ○ a. p ☐◹
17	34.7	23	92	60	8	6	------	≡ d° a. ☐◹ a. p.
18	34.9	23	97	64	9	7	------	☾ ☊² a. ☐◹ ☁ p.
19	35.5	22.6	92	56	7	4	22.9	☌² a. ☐◹ d p.
20	34.9	22.1	95	79	9	10	------	☐◹ a. p. d p.
21	33.5	21.5	95	90	8	10	5.1	☌² ≡° a. ☐◹² p.
22	35.1	21.9	95	80	9	7	2.6	☾ ○ a. ☐◹ ●° p.
23	34.8	22.6	97	67	8	9	8.9	d ≡ a. ● ☐◹ p.
24	33.2	22.6	93	70	9	9	15	≡ a. ☐◹² ● p.
25	33.3	23	98	74	10	10	6.7	d a. p.
26	29.6	23.4	94	74	10	10	11.3	d ☐◹ a. ● a. p.
27	32	21.4	97	79	8	9	2.9	≡ a. p a. p. ☐◹ p.
28	32.7	22.8	96	75	9	9	17.8	● a. p. ☐◹ p.
29	33.7	21.7	96	77	7	9	1	● a. ☐◹ p p.
30	35.7	22	94	58	8	7	.3	☌² a. ☐◹ p.
31	32.5	22.3	98	87	9	7	50.6	☌² ○° a. ☐◹ ●² p.
Mean	33.9	22.4	93.7	64	7.9	7	------	
Total	------	------	------	------	------	------	186.7	

SAN ANTONIO.

[ϕ=14° 22′ N; λ=121° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.2	17.5	97	65	8	6	------	
2	30.6	20.1	98	70	9	6	------	
3	31	20.7	96	63	7	8	------	
4	30.3	20.3	98	63	6	6	------	☽ p.
5	30.5	21.2	98	67	8	6	------	
6	30.5	19.5	90	63	10	8	36.8?	● p.
7	30.5	18.4	98	70	9	6	------	● a.
8	30.5	21.8	96	63	9	7	------	
9	30.5	20.2	99	64	6	6	------	
10	30.6	20.3	96	69	10	6	------	
11	31.9	20.2	97	70	6	6	------	
12	30.8	20.3	99	65	7	6	------	
13	32.4	20.2	98	62	8	7	------	
14	------	20.6	97	59	7	6	------	
15	------	20.1	96	60	7	6	12.7	
16	30.3	20.2	99	64	9	6	13.7	● a.
17	------	21	97	51	9	6	------	● a.
18	31.3	20.2	98	63	7	3	------	
19	30.7	20.6	98	62	6	4	------	
20	------	20.2	97	64	6	9	------	
21	30.6	20.2	98	67	6	6	25.4	● a.
22	30.8	20.2	97	67	6	6	7.6	● a.
23	30.6	20.6	96	69	7	6	6.1	● a.
24	30.6	20.3	93	69	6	6	10.2	● p.
25	------	20.4	96	60	7	8	10.2	● p.
26	30.8	20.2	98	63	6	6	6.1	● p.
27	------	20.6	99	66	9	6	------	
28	30.7	20.2	98	67	6	4	26.7	● a. p.
29	30.6	20.4	97	67	7	6	26.7	● p.
30	30.6	20.2	93	67	10	6	------	
31	30.6	20.2	98	67	6	7	1.8	p p.
Mean	30.7	20.2	96.9	64.7	7.4	6.2	------	
Total	------	------	------	------	------	------	184	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	22.1	80	59	1	5	------	☌ a. ☾ p.
2	------	21.8	92	64	1	4	0.6	d° ┬ ☾ p.
3	------	22.5	97	63	4	8	2.8	● d ☁ ☐◹° p.
4	------	22.7	95	68	5	4	------	d ☾ p.
5	------	22.7	95	62	6	7	.8	≡ a. ☐◹ ●° p.
6	------	23	97	70	5	9	1.7	≡ a. ☐◹ ● ☾ p.
7	------	23.1	99	68	10	10	5.3	┬ d° a. d p.
8	------	23	97	67	10	10	------	● a.
9	------	19.7	97	66	10	9	------	☌ ≡ ○ a. ⊕ p.
10	------	21	96	66	8	3	------	☌ ≡ ○ a. ☐◹ p.
11	------	22.1	97	65	4	4	------	
12	------	22.4	92	76	10	10	.5	┬ d° ☾ p.
13	------	21.3	94	63	5	7	------	≡° a. ☁ ☐◹ p.
14	------	21.2	96	67	10	4	------	d ┬ ☾² a. ☐◹ p.
15	------	23.5	94	72	4	8	.3	┬ a. p. d° ☾ p.
16	------	21.7	94	67	7	3	------	┬ ☾° ☾ p.
17	------	21.7	97	61	4	3	------	≡ a. ⊕ ┬ ☾ p.
18	------	21	92	67	2	3	------	≡ a. ⊕ ┬ ☾ p.
19	------	23.2	89	68	4	5	54.6	⊕ ┬ ●² p.
20	------	22.8	94	73	9	9	------	●² ┬ ☁ ○° a. ☾ p.
21	------	23.7	83	76	5	10	.9	☐◹ d° p.
22	------	23.1	97	72	10	10	------	☁ a. ☐◹ ☾ p.
23	------	23.7	83	78	9	8	30.6	☁ ○ ┬ a. ● ☐◹
24	------	23	93	93	10	10	169.7	┬ a. ●² a. p.
25	------	23	92	90	10	10	74.4	●² ☾° ☐◹ a. p.
26	------	23.2	94	86	10	10	54.2	● a. p. ┬ p.
27	------	22.5	97	74	10	10	87.6	●° a. ●² p.
28	------	23.1	97	96	10	10	125.3	●² a. p. ☐◹ p.
29	------	22.5	91	97	10	10	147.3	☐◹² a. ●² a. p. ┬²
30	------	22.5	90	72	9	10	------	
31	------	23	89	74	10	9	------	☐◹° p.
Mean	------	22.4	93.2	72.3	7.2	7.5	------	
Total	------	------	------	------	------	------	756.6	

TARLAC

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	36.2	21.8	93	49	3	3	------	☌ a.
2	36	22.5	96	43	2	3	------	☌ a. ┬ p.
3	36.2	22.4	94	45	4	2	------	☌ a. d° ┬ p.
4	36.2	22.5	96	44	2	4	------	☌ a. ┬ p.
5	36.3	22.2	93	49	4	9	9.1	☌ a. ● p.
6	36.3	23	96	48	5	10	7.9	☌ a. ● ☐◹ p.
7	33.9	23.6	97	52	9	10	------	☌ a.
8	35.3	23.3	92	50	9	6	------	☌ a.
9	36.3	20.8	96	45	4	8	------	☌ ≡° a.
10	36.6	22.6	93	51	4	3	------	☌ a. ┬ p.
11	35.6	25	93	49	10	8	------	☌ a.
12	36.9	23.7	96	42	4	8	14.7	☌ a. ● ┬ p.
13	36.6	23.6	97	46	5	2	57.4	☌ a. p. ☐◹ p
14	35.4	24.2	97	51	10	6	17.5	d a. ┬ ● p.
15	35.6	25.4	96	53	10	7	2.5	☌ a. ● p.
16	35.5	25.3	94	59	9	9	------	☌ a. ☋ p.
17	35.5	22.6	93	55	5	8	------	d° p.
18	35.6	23.3	94	50	9	7	------	☌ a. d° p.
19	35.6	23.2	93	51	5	8	6.6	☌ a. ● p.
20	35.5	22.8	97	65	5	7	9.1	☌ a. ● p.
21	34.7	22.6	97	59	4	7	------	☌ a.
22	34.8	23.8	96	57	9	8	------	☌ a.
23	33.2	23.4?	96	96	5	10	25.1	☌ ≡ a. ● ☐◹ p.
24	26.9	23.6	97	95	10	10	51.9	d a. p. ● p.
25	27.4	23.5	95	90	10	10	33.1	● a. p. d p.
26	29.6	23.8	97	88	10	10	4.6	☐◹ a. ● a. p.
27	31.1	23.4	97	75	10	8	37.1	☌ ≡ a. ● a. p.
28	29.5	23.4	97	90	10	10	34	● a. p.
29	27.2	23.2	97	94	10	10	19.3	● a. p.
30	32.7	23.1	98	90	10	8	------	
31	34	23	97	58	10	4	------	☌ a.
Mean	34.1	23.2	95.5	60.9	7	7.2	------	
Total	------	------	------	------	------	------	329.9	

METEOROLOGICAL DATA, ETC.—Continued.

BALER.

[ϕ=15° 40′ N; λ=121° 34′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	22.1	97	73	7	2	------	
2	------	22.9	95	73	10	10	------	
3	------	23	93	69	10	2	4.1	
4	------	23	95	67	10	2	.8	
5	------	23.2	94	62	10	10	------	
6	------	22.3	89	64	10	10	------	
7	------	24.8	78	58	10	10	------	
8	------	------	76	56	10	10	------	
9	------	24	79	60	10	10	------	
10	------	23.5	93	68	10	7	6.4	
11	------	22.6	94	89	10	5	------	
12	------	23.8	95	72	10	4	------	
13	------	23.7	94	70	10	10	.5	
14	------	23.8	93	67	10	10	------	
15	------	23.4	92	65	10	10	------	
16	------	------	------	------	------	------	------	
17	------	------	------	------	------	------	------	
18	------	------	------	------	------	------	------	
19	------	------	------	------	------	------	------	
20	------	------	------	------	------	------	------	
21	------	------	------	------	------	------	------	
22	------	------	------	------	------	------	------	
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
31	------	------	------	------	------	------	------	
Mean	------	23.3	90.5	67.5	9.8	7.5	------	
Total	------	------	------	------	------	------	------	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	25	85	60	1	1	------	
2	33.7	25	88	56	2	1	------	
3	33.7	25.5	85	62	3	2	------	☿² d° p.
4	35.2	24.4	84	48	2	1	------	
5	33.8	25.2	88	59	2	2	3.3	☐☌² ● p.
6	32.4	24.3	87	65	3	5	------	☿° p.
7	32.4	24.3	73	83	10	10	3.8	● p.
8	32.4	25.4	78	65	10	3	------	
9	32.8	22.6	92	62	3	5	------	☐☌² p.
10	32.4	22.5	97	68	2	2	------	☿² p.
11	32.7	25.8	71	66	10	3	------	
12	33.2	24.5	69	66	10	3	------	
13	33.9	26.3	86	63	10	2	------	
14	34.2	25	82	66	9	6	------	
15	33.9	25.2	88	64	6	1	------	
16	33.7	25	71	61	2	1	------	
17	33.3	25	88	63	2	2	------	
18	34.6	23.2	82	57	1	1	------	
19	35.1	25	79	63	1	2	52.3	☐☌² ● p.
20	31.7	22	68	69	10	3	28.7	●²a. p. ☐☌² p.
21	33	23	89	59	5	3	16	☐☌² ◠² ● p.
22	32.3	24.2	93	77	10	6	3.3	☐☌° ●° p.
23	31.9	24.4	95	75	9	10	26.2	●² p.
24	25.9	23.4	93	94	10	10	82	●² a. p.
25	26.5	23.4	90	84	10	10	99.1	●² ☐☌² p.
26	26	23.6	94	92	10	10	75.6	●² a. p.
27	30.7	22.7	90	78	3	6	------	d° a. ☐☌ ◠² p.
28	30.9	23.5	91	87	8	10	2.6	●° p.
29	25.6	23.2	92	97	10	10	63.5	●² a. p.
30	31.8	23	91	81	10	10	3.8	● p.
31	32.4	23.6	89	69	5	3	21.8	●² ☐☌² p.
Mean	32.1	24.2	85.4	69.6	6.1	4.6	------	
Total	------	------	------	------	------	------	482	

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35.8	20.6	95	56	1	3	------	☊² a.
2	34.4	21.8	95	55	1	2	------	☊² a. ☇° p.
3	35.4	22.8	95	46	3	3	------	☊² a. ☿° ☇° p.
4	35.3	21.6	94	53	3	4	------	☊² a. ◠° ☐☌° p.
5	32.4	22.1	94	68	9	9	0.8	☊²a.d² ☿°◠☇°p.
6	29.8	22.3	97	84	10	10	19.6	d² ☿° a. p. ☐☌° p.
7	30.7	22	97	72	10	10	.5	d² a. ☐☌° p.
8	32.2	21.3	98	68	10	9	.5	○² a. ☾ᶜ d² p.
9	32.8	22.3	94	62	9	9	------	○² a. p. ☐☌° p.
10	34.1	23.6	98	54	10	3	------	☇° p.
11	35.8	23.5	97	53	10	3	------	☇° p.
12	37.1	23.3	96	51	1	3	------	☊° a. ☇° p.
13	36.7	23.5	94	53	4	3	------	☐☌° p.
14	38	23.6	98	50	8	2	------	
15	33.4	22.1	98	53	3	3	------	
16	33.2	21.6	96	55	2	4	------	○° a.
17	34.3	23.9	92	51	10	4	------	
18	35.6	22.9	96	52	4	5	5.3	☐☌° d² p.
19	34.8	21.9	99	58	9	3	------	≡² a. d° ☐☌° p.
20	33.4	22.6	97	60	7	7	26.9	☿° a. p. ☐☌° ●° p.
21	34	22.2	98	63	10	7	4.1	○² a. ☐☌° d² p.
22	32.9	23.5	97	63	10	5	5.3	☿°d°a. ☿°●° ☇°p
23	32.9	23	97	64	10	10	2	○° a. p. d° ☐☌° p.
24	28.7	23.1	99	78	10	10	8.4	☿° d° a. p.
25	25	22.9	99	93	10	10	26.4	● a. p. ☇° p.
26	33	23.3	98	66	10	10	------	d° a. ☇° p.
27	32.1	23.7	96	63	9	9	37.6	☿°d²a. ☐☌° ●² p.
28	32.4	22.4	99	69	10	9	4.4	◠°d ☿°a. ☿°d² p.
29	29.5	23	99	73	7	10	3	≡²d°a. ☿°d² ☇° p.
30	33.2	22.7	97	69	10	9	------	◠°a. d°a. p. ☿°p.
31	33.5	22.5	97	55	6	5	------	☿° a. p. ☇° p.
Mean	33.3	22.6	96.6	61.6	7.3	6.2	------	
Total	------	------	------	------	------	------	144.8	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.1	24.1	78	61	3	0	------	☊ a. ☐☌° p.
2	32	25.4	80	62	4	0	------	☊ a. ☿° ☇ d p.
3	32.3	27	76	58	8	2	------	☿° ☇p.
4	32.7	25.5	80	57	0	1	------	☊ a. ☇ p.
5	32.9	26	77	60	2	4	------	☊ a. ☿° ☇ p.
6	33.4	24.9	72	52	6	9	1.8	☊ a. ☿° p ☿ p.
7	29.9	25.5	76	77	10	10	11.4	p a.
8	30.7	26.9	79	68	9	9	------	d a.
9	31.5	24.2	81	64	6	7	------	☊ a. ☇ p.
10	31.8	24.4	79	55	3	4	------	☊ a.
11	31.7	26.5	80	63	9	8	------	☊ a.
12	31.6	25.1	79	61	8	9	------	d a. p.
13	32	24.8	81	58	6	7	41.9	☊ a. ☐☌² ●² p.
14	32.4	25.4	73	59	4	5	------	●² a.
15	31.8	25	80	59	4	3	------	☊ a.
16	32	25	88	61	3	6	------	☊ a.
17	32.4	25.3	85	59	5	4	------	☊ a.
18	32	24.4	81	62	3	1	------	☊ a. ☇ p.
19	32.3	24.8	81	61	1	0	23.6	☊ a. ☐☌² ● p.
20	30.5	24.6	86	70	10	7	16.3	☿° a. ● a. p.
21	30.9	24.8	87	70	8	6	8.1	● a. ☿° ☇ p.
22	30.8	25.5	87	69	10	5	25.4	● d a. p. ☿° ☇ p.
23	29.7	24.5	87	76	9	9	12.4	● a. ☿° p p.
24	26.8	24.4	91	87	10	10	84.1	● a. p.
25	26	23	91	83	10	10	207.2	●² ☐☌ a. ☄° p.
26	26.6	24.4	92	90	10	10	20.8	● ☿° a. p.
27	30	24.2	92	77	4	5	14.2	● p.
28	28.9	25	88	85	9	10	14.4	● a. p.
29	25.4	24.1	91	91	9	10	15.2	● a. p.
30	29.7	24	87	78	10	10	1.5	p ☿° p.
31	29.7	24	88	74	8	9	10.7	☊ a. ☐☌² ● p.
Mean	30.7	24.9	83	68	6.5	6.1	------	
Total	------	------	------	------	------	------	509	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.7	23.5	94	53	0	3	------	☊² ☰° a. ⊤ p.
2	34.6	23.5	89	58	0	2	------	☊ a. ⊤ p.
3	34.8	23.4	91	52	0	2	------	☊² ☰° a.
4	35.4	22.3	88	53	0	2	------	☊² a. ☇ p.
5	36.2	23.8	89	44	0	2	------	☊ ☰° a. ☇ p.
6	35.8	25.4	69	51	2	4	16.5	☄° a. p. d p.
7	28.4	22.8	96	97	10	10	69.9	● ☄° a. p. ☇ p.
8	30.8	21.7	96	71	10	10	2	◪² ● a. ☄° a. p.
9	32.4	24	89	70	9	4	------	
10	32.8	23	93	60	0	1	------	☊² a.
11	32.9	24.1	94	65	0	3	------	☊² ☰° a. ⊤ p.
12	34	24	91	57	3	3	------	☊² ☰° a. ☇ p.
13	32.6	24.7	92	60	3	3	------	☊² ☰° a.
14	33.9	24.5	92	59	2	2	------	☊° ☰° a. ⊤ p.
15	34.3	25	84	65	1	3	------	⊤ p.
16	33.7	22.8	83	49	0	2	------	
17	33.8	20.2	87	56	0	3	------	
18	33.7	23.7	91	60	0	2	------	☰° a.
19	34	23.5	81	------	0	3	------	⊤ p.
20	33.8	24	88	58	9	4	------	⊤ ◡° p.
21	34.5	24.7	88	57	9	5	10.9	◪ p.
22	31.9	24.1	96	66	10	6	18.3	● a. ◪ p.
23	30.2	23.5	94	69	10	10	86.6	◪ a. ●² a. p.
24	28.3	22.4	98	78	10	10	23.8	● d a. p.
25	25.5	23	97	97	10	10	75.7	●²a.p. ☄° ◪²p.
26	29.8	22.5	94	75	10	10	22.6	● a. p. ◡² p.
27	30.3	23.7	94	77	10	9	------	
28	29.1	24.5	93	87	9	10	35.8	● a. d p.
29	28.7	23.7	97	84	10	10	1.5	● a. d° p.
30	30.9	24.2	96	69	10	10	1.3	● p.
31	32.3	23.5	92	69	10	9	.5	d ◠ a. ◪ p.
Mean	32.4	23.5	90.8	65.5	5.1	5.4	------	
Total	------	------	------	------	------	------	365.4	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	26	80	75	6	2	------	
2	31.4	25.8	82	72	2	1	------	☊ p.
3	31	25.8	82	69	1	1	------	d ☊ p.
4	31.2	22.9	87	68	0	2	------	v a. ☊ p.
5	30.8	23.2	88	70	1	6	------	d a. p.
6	29.9	25.9	82	75	7	8	5.2	d p.
7	26.9	24.8	84	87	10	10	75.2	d ● a. p. ☄° p.
8	26.7	23.3	91	85	10	10	24.6	☄° d ● a. p.
9	29	25.3	83	78	10	7	------	
10	29.7	25.5	88	78	1	2	------	☊ p.
11	30.9	24.1	95	73	0	1	------	☊ a. p.
12	30.3	23.4	92	82	3	5	------	☊² ☇° p.
13	29.9	25.4	93	76	3	1	------	☊² p.
14	30.7	21.8	89	75	0	2	------	☊² a. p.
15	30.3	24.2	83	73	4	0	------	v a. ☊ p.
16	30.1	22.6	89	77	0	2	------	v a.
17	30.4	25.3	83	81	9	10	------	d° ☊² p.
18	29.9	22.7	93	72	2	3	------	d° v a. ☊² p.
19	29.9	23.3	93	75	0	1	------	☊² p.
20	30.2	23.3	85	75	2	2	.5	d² p.
21	29	24.7	87	77	9	7	3	d ●° p.
22	26.4	24.1	86	84	10	10	.8	●° a. ● p.
23	27	23.3	86	80	10	10	30.3	●° a. ● p.
24	26	23.3	93	91	10	10	70.6	● a. p.
25	28.2	23.3	96	88	10	10	76.1	● a. p.
26	28.7	23.6	97	88	10	8	5.9	● a. d a. p.
27	28.9	24.4	81	73	8	4	------	
28	29.3	24.8	77	70	8	4	------	d° p.
29	29.9	23.7	80	91	10	10	37.5	●° d p.
30	27.5	22.6	94	86	10	10	20.1	◪ ● a. p.
31	28.9	23.8	87	85	10	10	------	⊤° p.
Mean	29.4	24.1	87.3	78.4	5.7	5.5	------	
Total	------	------	------	------	------	------	357	

SEISMOLOGICAL BULLETIN FOR MAY, 1910.

By. Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

4, 7^h 55^m 31^s.* **Guam** (Marianas Islands). Earthquake of intensity IV. Two series of shocks were felt, separated by an interval of 2 seconds. The entire duration was about 12 seconds. This disturbance has been registered by the seismographs at Manila and Osaka.

5, 0^h 30^m. **Yap** (Western Carolines). Earthquake of intensity IV.

5, 6^h 50^m. **Gubat** (SE of Luzon). Oscillatory earthquake. Direction N–S; intensity IV.

6, 14^h 12^m. 10^s.* **Baguio** (W of Central Luzon). Earthquake of intensity III. The origin of this quake lay about 200 kilometers north of Manila, very probably in the Province of Nueva Vizcaya where it must have been somewhat more intense. The branch observatory at Baguio is the Weather Bureau Station nearest to the province mentioned, being at a distance of less than 40 kilometers.

10, 22^h 32^m 56^s.* **Valley of the Agusan River** (E of Mindanao). Earthquake which displayed force IV at Butuan, in the northern part of the valley. More to the south, it was doubtlessly of greater intensity without, however, being violent. At Surigao, at a distance of 100 kilometers from Butuan, it was felt with force III; hence, its radius of action was at least 150 kilometers, covering nearly the whole of eastern Mindanao. The epicenter of this earthquake must have been in the northern part of the region of the valley, which is the usual place of origin of the principal earthquakes of the Agusan, and appears to extend about 50 kilometers south, and 60 or more kilometers north of parallel 8° N.

At 23^h 7^m 42^s* there occurred in the same region a second earthquake of intensity V and much longer duration, whose center appears to have been identical with that of the preceding.

11, 0^h 18^m 27^s.* **Northeastern Mindanao.** Earthquake of intensity IV. The origin of this disturbance seems to have been a considerable distance east of the center responsible for the two preceding earthquakes, toward the coasts of the Pacific Ocean.

11, 1^h 24^m 36^s.* **Northeastern Mindanao.** Earthquake of intensity V throughout the quasi-peninsula of Surigao. Its origin lay probably in the Pacific Ocean, near the northeastern coast of Mindanao, a short distance south of the small Island of Siargao. In Surigao the earthquake was accompanied by very perceptible noises (Degree III of the Davison scale).

Of the earthquakes which occurred during the night of May 10 to 11, only the two at 23^h 7^m 47^s and 0^h 18^m 27^s have been registered outside of the Archipelago, namely, at Zikawei Observatory; none, however, seems to have been recorded at the more distant observatories.

18, 5^h 45^m 50^s.* **Vigan** (NW of Luzon). Earthquakes of intensity III, lasting 4 seconds.

20, 12^h 4^m 13^s.* **Northeastern Mindanao.** Earthquake of intensity IV throughout the quasi-

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

peninsula of Surigao and the northern part of the Agusan Valley. It showed equal intensity at Surigao and Butuan which are separated by a distance of about 100 kilometers, and appears to have been due to a center in the Pacific Ocean not far from the northeastern coast of Mindanao. Outside of the Archipelago only the seismographs of Zikawei registered this disturbance.

23, 13h 1m. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction NW-SE; intensity III; duration 14 seconds.

23, 17h 50m. **Ormoc** (W of Leyte). Oscillatory earthquake. Direction SW-NE; intensity II; duration 4 seconds. Repetition of the same intensity at 18h 48m.

24, 8h 50m. **Virac** (Catanduanes Island). Oscillatory earthquake. Direction SE-NW; intensity III; duration 3 seconds.

24, 19h 43m. **Ilocos Provinces** (NW of Luzon). Earthquake of intensity III, perceptible along the coasts of Ilocos Norte and Sur, over an extent of more than 100 kilometers. The direction of the shocks, which appeared to come from west, makes it probable that the center lay beneath the China Sea, not far from the coast.

26, 15h 15m. **Ormoc** (W of Leyte). Oscillatory earthquake. Direction SSW-NNE; intensity III; duration 8 seconds.

30, 14h 58m 14s.* **Baguio** (W of Central Luzon). Oscillatory and trepidatory earthquake, having the direction ESE-WNW and intensity III.

31, 17h 42m 49s.* **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction E-W; intensity III; duration 7 seconds. This earthquake was likewise registered by the seismographs of Zikawei.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight =0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2a.)	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	h. m. s.	h. m. s.	h. m. s.	mm.	s.	h. m.	
			V.	2 40 56	2 44 55	2 48 46	2 49 34	0.02	6.8	3 15	
75	2	I_r	H. NNW	2 40 56	2 44 58	2 48 48	2 49 38	.27	13.5	3 16	
			H. WSW	2 40 56	2 44 55	2 48 47	2 49 39	.21	9	3 16	
76	4	I	H. NNW	7 55 31	----------	7 59 37	8 02 26	.15	10.8	8 21	
			V.	14 12 10	----------	14 12 32	14 12 44	.60	2.4	14 27	Vertical Component 0.52 mm.
77	6	I_v	H. WSW	14 12 13	----------	14 12 36	14 13 25	.10	6.6	14 23	Earthquake, III at Baguio (W. of Central Luzon).
			V.	17 36 29	----------	----------	----------	------	------	17 52	
78	10	I_v	H. NNW	17 36 29	----------	17 40 19	17 41 15	.12	10.2	17 55	
			H. WSW	17 36 29	----------	----------	----------	------	------	17 55	
			V.	22 32 56	----------	----------	----------	------	------	22 52	Eqke., IV Agusan River Valley (E. of Mindanao).
79	10	I_v	H. NNW	22 32 56	----------	22 34 48	22 35 03	.05	7.2	22 58	
			H. WSW	22 32 56	----------	22 34 45	22 35 13	.04	6.9	22 53	
			V.	23 07 42	----------	23 09 39	23 10 38	.06	2.4	23 48	Eqke., V Agusan River Valley (E. of Mindanao).
80	10	II_v	H. NNW	23 07 42	----------	23 09 39	23 12 03	2.13	12	23 52	
			H. WSW	23 07 42	----------	23 09 40	23 12 04	1.44	11.4	23 52	
			V.	0 18 27	----------	0 20 42	0 24 07	.03	5.2	0 58	Eqke., IV northeastern Mindanao.
81	11	I_v	H. NNW	0 18 27	----------	0 20 28	0 22 40	1.80	12	0 58	
			H. WSW	0 18 27	----------	0 20 36	0 22 35	1.05	10.2	0 58	
82	11	I_v	H. NNW	1 24 36	----------	1 26 52	1 27 46	.12	7.8	1 43	Eqke., V northeastern Mindanao.
83	12	I_d	V.	14 26 06	----------	14 26 27	14 26 35	.39	2.4	14 30	V. C. 0.16 mm.
84	13	I_r	H. NNW	16 08 44	----------	16 18 40	16 21 25	.31	12	17 08	
			H. WSW	16 08 44	----------	16 18 48	16 21 45	.07	9	17 05	
85	16	I_r	H. NNW	0 09 57	----------	----------	----------	------	------	0 30	
			H. WSW	0 09 57	----------	----------	----------	------	------	0 30	
86	18	I_v	V.	5 45 50	----------	5 46 15	5 46 22	.03	2.4	5 49	V. C. 0.01 mm. Eqke., III at Vigan (NW. of Luzon).
			V.	12 04 13	----------	12 06 23	12 07 43	.02	2.4	12 28	Eqke., northeastern Mindanao.
87	20	I_v	H. NNW	12 04 16	----------	12 06 28	12 07 40	.20	10.2	12 29	
			H. WSW	12 04 16	----------	12 06 34	12 07 39	.23	8.7	12 29	
			V.	14 31 20	14 36 34	14 41 25	14 44 08	.01	14.8	15 28	
88	22	I_r	H. NNW	14 31 25	14 37 23	14 41 30	14 46 02	.25	12.3	15 21	
			H. WSW	14 31 25	14 36 41	14 41 30	14 45 17	.07	12	15 21	
89	30	I_v	V.	14 58 14	----------	14 58 39	14 58 53	.02	2.4	15 01	V. C. 0 01 mm. Eqke., III at Baguio (W of Central Luzon).
90	30	I_d	V.	21 04 46	----------	21 05 01	21 05 29	.06	2.4	21 08	V. C. 0.02 mm.
91	31	I_v	V.	17 42 49	----------	17 44 00	17 45 53	.37	2.4	18 10	Eqke., III at Tacloban (NE of Leyte).
			H. NNW	17 42 51	----------	17 44 04	17 45 39	.99	11.4	18 06	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation, NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only four to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

4, 7^h 55^m 31^s.* **Guam** (Islas Marianas). Temblor de tierra de intensidad IV. Sintiéronse dos series de choques separados por un intervalo de 2 segundos. La duración total fué de unos 12 segundos. Este terremoto fué registrado por los seismógrafos de Manila y Osaka.

5, 0^h 30^m. **Yap** (Carolinas Occidentales). Temblor de tierra de intensidad IV.

5, 6^h 50^m. **Gubat** (SE de Luzón). Temblor oscilatorio, dirección N-S, intensidad IV.

6, 14^h 12^m 10^s.* **Baguio** (W del Centro de Luzón). Temblor de tierra de intensidad III. El origen de este temblor se hallaba á unos 200 kilómetros al N de Manila muy probablemente en la Provincia de Nueva Vizcaya donde debió tener alguna mayor intensidad. La estación de Baguio es la del Weather Bureau más próxima á la mencionada provincia de donde dista menos de 40 kilómetros.

10, 22^h 32^m 56^s.* **Valle del Río Agusan** (E de Mindanao). Temblor de tierra de intensidad IV en Butúan, que está al N del Valle; más al Sur la tuvo sin duda mayor pero sin llegar á ser violento. Fué perceptible con intensidad III en Surigao, que dista dè Butúan 100 kilómetros, de manera que el radio de acción de este temblor fué á lo menos de unos 150 kilómetros comprendiendo casi toda la parte oriental de la Isla de Mindanao. El epicentro debió hallarse en la parte N de la región del Valle, donde suelen originarse los principales terremotos del Agusan, la cual parece extenderse unos 50 kilómetros al Sur y unos 60 ó más kilómetros al N del paralelo 8° lat. N.

Á 23^h 07^m 42^s.* Tuvo lugar en la misma región un segundo terremoto de intensidad V y mucha mayor duración: el origen parece fué el mismo.

11, 0^h 18^m 27^s.* **NE de Mindanao.** Temblor de tierra de intensidad IV. El origen de este temblor parece se hallaba bastante más al E, que el de los dos precedentes, hacia las costas del Pacífico.

11, 1^h 24^m 36^s.* **NE de Mindanao.** Temblor de tierra de intensidad V en toda la cuasi-península de Surigao. Su origen se hallaba probablemente en el Pacífico cerca de la costa NE de Mindanao, no lejos al Sur de la pequeña Isla Siargao. En Surigao fué acompañado de un ruido muy perceptible (grado III de Davison).

De estos terremotos de la noche del 10 al 11, solo los dos que tuvieron lugar á 23^h 7^m 47^s y 0^h 18^m 27^s se registraron fuera del Archipiélago, en el Observatorio de Zikawei; en los Observatorios más lejanos no parece se registró ninguno.

18, 5^h 45^m 50^s.* **Vigan** (NW de Luzón). Temblor de tierra de intensidad III, duración 4 segundos.

20, 12^h 04^m 13^s.* **NE de Mindanao.** Temblor de tierra de intensidad IV en toda la cuasi-península de Surigao y parte N del valle del Río Agusan. Tuvo igual intensidad en Surigao y en Butúan que distan entre sí unos 100 kilómetros. Su origen parece debe situarse en el Pacífico no lejos de la costa NE de Mindanao. Fuera del Archipiélago registráronlo solamente los seismógrafos de Zikawei.

23, 13^h 01^m. **Butúan** (N de Mindanao). Temblor oscilatorio, dirección NW-SE, intensidad III, duración 14 segundos.

23, 17^h 50^m. **Ormoc** (W de Leyte). Temblor oscilatorio, dirección SW-NE, intensidad II, duración 4 segundos. Repitió con la misma intensidad á 18^h 48^m.

24, 8^h 50^m. **Virac** (Isla Catanduanes). Temblor oscilatorio, dirección SE-NW, intensidad III, duración 3 segundos.

24, 19^h 43^m. **Ilocos** (NW de Luzón). Temblor de tierra de intensidad III, perceptible á lo largo de las costas de Ilocos Norte y Sur en una extensión de más de 100 kilómetros. Probable-

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el meridiano 120° E de Greenwich.

mente el origen se hallaba á poca distancia en el mar de la China, según indica la dirección de los movimientos que parecían proceder del W.

26, $15^h\ 15^m$. **Ormoc** (W de Leyte). Temblor oscilatorio, dirección SSW-NNE, intensidad III, duración 8 segundos.

30, $14^h\ 58^m\ 14^s$.* **Baguio** (W del Centro de Luzón). Temblor oscilatorio y susultorio, dirección ESE-WNW, intensidad III.

31, $17^h\ 42^m\ 49^s$.* **Tacloban** (NE de Leyte). Temblor oscilatorio, dirección E-W, intensidad III, duración 7 segundos. Este temblor fué también registrado por los seismógrafos de Zikawei.

BULLETIN FOR JUNE, 1910.

METEOROLOGICAL BULLETIN FOR JUNE, 1910.

By Rev. JOSÉ CORONAS, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The mean atmospheric pressure for this month differs very slightly from that of June, 1909. The highest pressures were recorded on the 11th or 12th; the lowest on the 27th or 28th in northern Luzon, and either on the 4th or 24th in central and southern Luzon and the Visayan Islands.

The monthly mean temperature for all our stations is either identical with that of the preceding year or slightly below it. That of Manila falls short of the normal for June by 0.7° C.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR JUNE, 1910.

	Pressure.						Temperature.					
	Mean.	Departure from June, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from June, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran [1]	757.44	—0.64	759.14	11	756.17	4	27.3	—0.5	34.8	1	22.4	21
Cebu	57.91	— .38	59.56	11	56.60	24	27.2	—1	31.5?	2	22.9	30
Iloilo	57.79	— .57	59.26	11	56.50	4	27.5	— .1	34	2	23	4
Ormoc	58.12	— .16	59.71	11	56.75	4	26.1	— .3	33.8	12	20	6
Tacloban	58.78	+ .17	60.66	11	57.30	24	26.9	— .8	33	6	23	21
Calbayog	58.59	— .12	60.47	11	57.11	24	26.4	— .5	33.6	6	21.8	10
Legaspi	58.35	— .07	60.27	11	56.86	24	27.7	— .1	33.3	3	22	29
Atimonan	58.22	+ .08	60.41	12	56.88	27	27.7	— .2	34.5	9	23.3	10,26
Manila	58.06	— .09	60.16	12	56.74	4	27.2	— .6	34.5	8,10,15	21.9	18
San Isidro	58.01	— .01	60.17	12	56.74	24	27.7	— .3	35.3	7	22	18
Dagupan	57.81	— .07	59.75	12	56.36	27	28.2	0	36.9	14	22.6	18
Bolinao	57.56	— .32	59.46	12	55.76	28	28.2	+ .3	36.1	12	23	23
Baguio [2]	636.31		638.04	11	634.52	28	19		26.1	13	15.4	24
Vigan	757.85	— .02	759.68	12	755.74	29	27.9	— .4	33.8	6,20	21.4	17
Tuguegarao	58.12	+ .48	60.41	12	56.20	27	28.7	— .4	37.9	16	22.2	18
Aparri	58.29	+ .33	60.47	12	55.99	27	28.1	— .2	34.7	16	22	1

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Precipitation.—The total amount of rainfall for this month is in some stations below, and in others above that of June, 1909. The total for Manila differs from the normal of June by —160.1 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF JUNE, 1910.

Station.	Total.	Departure from June, 1909.	Rainy days.	Departure from June, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from June, 1909.	Rainy days.	Departure from June, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	460.7	+173.6	22	+ 2	52.5	24	Sumay, Guam	123	— 11.5	16	— 3	34.3	30
Isabela, Basilan	334.6	+171.5	25	+ 7	42.9	1	Calapan	423.7	+ 171.1	24	+ 8	98.6	4
Zamboanga	148.7	+ 51.5	17	+ 3	34.3	10	Virac	158.3	— 3	25	+ 7	29.7	22
Davao	402	— 12.5	14	+ 2	61	24	Nueva Caceres	108.2	— 76.5	14	0	22.9	25
Cotabato	323.1	+ 31	24	+ 8	50.8	30	Batangas	76.2	+ 5.6	9	— 2	29.2	11
Cagayan, Misamis	226	+ 76.8	18	— 1	46.5	18	Atimonan	165.9	+ 20.3	20	+ 7	60.9	12
Dapitan	165.6	+ 91.7	12	— 1	45.2	20	Silang	143.1	+ 3.6	10	— 1	61.2	26
Butuan	195.1	— 50.7	24	+ 5	31.8	3	Santa Cruz, La Laguna	152.1		18		35.8	28
Dumaguete	110.6		17		32.6	20	San Antonio, La Laguna	186.7	+ 108.1	13	0	38.1	12
Yap, W. Carolines	235.4		26		30	29	Manila	79.3	— 86.4	14	+ 3	21.5	28
Tagbilaran	204.7	+126	18	+ 6	77.2	17	Iba	205.3		19		37.1	30
Surigao	224.5	+108.3	24	+11	41.9	19	San Isidro	71.6	— 55.6	11	— 2	23.9	29
Maasin	221.2	+128.2	11	+ 5	58.4	26	Tarlac	107.9	+ 29.8	11	— 3	52.1	26
Cebu	141.3	+108.3	14	+ 1	39.6	30	Baler	392.3		23		76.2	21
Iloilo	110.4	—135.5	17	+ 1	42.2	3	Dagupan	172	— 44.4	16	0	39.6	26
San Jose Buenavista	256.5	— 21.3	23	— 1	56.6	27	Bolinao	266.8	— 174.2	17	— 2	72.6	24
Cuyo	257.2		22		30.7	8	Baguio, Benguet	230.3	— 14.1	17	— 5	66	24
Ormoc	140.2	— 20.8	22	+ 8	26.7	29	San Fernando, Union	36.8[2]		3		33	23
Tacloban	205.1	— 36.1	22	+ 2	36.1	27	Echagüe	23.5	— 32.9	7	— 3	7.4	26
Borongan	378.7	+195.8	25	+ 4	70.9	7	Candon	109.5	— 85.9	11	— 3	26.9	23
Calbayog	172.2	— 3.8	18	— 4	28.7	7	Vigan	237.9	+ 178.7	17	+ 1	55.4	29
Masbate	135.8[1]		12		50.8	27	Tuguegarao	38.9	— 104.6	5	— 5	21.6	27
Romblon	233.8	+ 57.4	20	0	50	23	Laoag	242.8	+ 7.2	15	— 3	128.3	29
Gubat	78.9	— 96	13	— 1	13.5	26	Aparri	119.3	+ 1.8	7	0	69	27
Legaspi	214.2	+ 79.3	18	+ 4	47	22	Sto. Domingo, Batanes Is.	47	+ 28.7	11	+ 5	23	26

[1] 27 days only.

[2] 21 days only.

DEPRESSIONS AND TYPHOONS.

Only two atmospheric disturbances were formed in the Far East during this month of June: a typhoon in the Balintang Channel and the northern part of the China Sea, and a depression in the western part of the China Sea. The latter, however, had scarcely any influence on the Philippines.

We will give here only a brief discussion of these disturbances, reserving the publishing of their tracks for the following number of the MONTHLY BULLETIN, in which these will appear, together with those of the typhoons of July.

DEPRESSION OF JUNE 21 TO 24, 1910.

In the ordinary weather notes for June 22 and 24, Manila Observatory said the following:

June 22, 11.50 a. m.: * * * Pressure is relatively low over the China Sea in the neighborhood of the Paracels.

June 24, 11.55 a. m.: Pressure is lowest over Indo China.

Indeed, a depression had formed in the China Sea on the 21st; it was situated south of, and not far from, the Paracels on the 22d, and entered in northern Indo China on the 24th. Thanks to the observations and reports kindly furnished to us by M. Le Cadet, director of Phulien Observatory, we will be able to give the track of this depression on Plate III, in the BULLETIN for July.

From the reports and warnings of Phulien Observatory just mentioned we take the following paragraphs which refer to this depression:

June 21, noon: A feeble depression is forming in the China Sea along the southern coast of Annam.

June 22, 4 p. m.: The depression appears along the central coast of Annam.

June 23, 11.28 a. m.: The depression has moved northwestward. It lies at present over the southern part of the Gulf of Tonking, between Quangtri and Vinh.

June 23, 5 p. m.: The center of the depression is entering the coast of Annam near Donghoi and moves toward Vinh.

June 24, noon: The depression, which is a shallow one and entered the coast yesterday afternoon, * * * is situated to-day W of Thanhhoa.

From Hongkong Observatory the following warning was received at Phulien in the afternoon of the 23d:

Typhoon in the south part of Gulf of Tonking, moving WNW.

Zikawei Observatory sent likewise the following typhoon warnings to the stations on the China coast:

June 23, 2.30 p. m.: Typhoon between Paracels and Hainan, moving NW.
June 23, 9 p. m.: Typhoon in the Gulf of Tonking, moving NW.

TYPHOON OF JUNE 25 TO JULY 1, 1910.

The weather maps of the Philippines for June 25 and 26 seem to indicate the existence of a depression to the east of the Visayas and of Luzon, respectively. On the 27th the observations of Aparri showed clearly that a typhoon was passing north of the station, moving W or WNW. Accordingly this telegram was sent to Tokio, Zikawei, Taihoku, Hongkong, and Phulien:

June 27, 11 a. m.: Typhoon near or over Balintang Channel, moving W or WNW.

On the afternoon of the same day and on the morning of the 28th two other warnings were sent by Manila Observatory. They read as follows:

June 27, 4 p. m.: Typhoon near or over Balintang Channel, moving W.
June 28, 9 a. m.: Typhoon W of Balintang Channel, moving W.

In fact, the typhoon moved almost due west from noon of the 27th until the morning of the 29th, when it began to incline decidedly northward, its rate of progress decreasing at the same time very considerably. On the 30th, at about noon, the typhoon entered the Continent west of Hongkong, moving northward.

Hongkong Observatory favored us with the following telegrams:

June 27, 1 p. m.: Typhoon near Balintang Channel, moving W.
June 28, noon: Typhoon W of Balintang Channel, moving WNW.
June 29, noon: Typhoon SW of Hongkong, moving WNW.
June 30, noon: Typhoon W of Hongkong, moving NNW.

Zikawei Observatory, on its part, sent to the stations along the China coast the following warnings:

June 27, 2.20 p. m.: Typhoon far to the E of Philippine Islands, moving NW.
June 27, 4.40 p. m.: Typhoon in the Balintang Channel, moving NW.
June 29, 10 a. m.: Typhoon S of Hongkong, moving NW.
June 30, 10 a. m.: Typhoon S of Hongkong, stationary.
June 30, noon: Typhoon in the coast near Macao, moving NW.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La presión atmosférica media de este mes difiere muy poco de la de Junio de 1909. Las mayores presiones se observaron el 11 ó 12; y las menores el 27 ó 28 en el norte de Luzón, y el 4 ó 24 en el centro y sur de Luzón y en las islas Visayas.

La media mensual de la temperatura es en casi todas las estaciones ó idéntica ó muy ligeramente inferior á la del año pasado. La de Manila se separa de la normal de Junio en —0.7° C.

Precipitación acuosa.—El total de lluvia de este mes es para unas estaciones mayor y para otras menor que la de Junio, 1909. La cantidad de agua recogida en Manila en todo el mes difiere de la normal de Junio en —160.1 mm.

DEPRESIONES Y TIFONES.

Este mes fué muy escaso en perturbaciones atmosféricas. No hubo más que un tifón en el canal de Balintang y región septentrional del Mar de China, y una depresión en la parte occidental del mismo Mar de China, la cual apenas influyó en Filipinas.

Diremos ahora cuatro palabras sobre ambos centros ciclónicos; pero sus trayectorias las publicaremos en el número siguiente de este Boletín juntamente con las de los tifones del mes de Julio.

DEPRESIÓN DE 21 Á 24 DE JUNIO, 1910.

El Observatorio de Manila decía lo siguiente en las notas ordinarias del tiempo de los días 22 y 24:

Día 22, 11.50 a. m.: * * * La presión atmosférica está relativamente baja en el Mar de China en los alrededores de Paracels.

Día 24, 11.55 a. m.: * * * La presión atmosférica está baja en Indochina.

En efecto, una depresión se había formado el 21 en el Mar de China entre las Filipinas é Indo China; el 22 se hallaba al sur y no lejos de Paracels, y el 24 penetraba en la parte norte de Indo China. Gracias á los informes y observaciones que se ha dignado remitirnos el Director del Observatorio de Phulien, M. Le Cadet, nos ha sido posible incluir la trayectoria de esta depresión en la lámina III (Boletín de Julio).

De los reports ó avisos dados por el mencionado Observatorio de Phulien tomamos las siguientes líneas que se refieren á esta depresión.

Día 21, mediodía: Una ligera depresión se está desarrollando en el Mar de China á lo largo de la costa sur de Annam.

Día 22, 4 p. m.: La depresión se halla á lo largo de la costa central de Annam.

Día 23, 11.28 a. m.: La depresión se ha propagado hacia el NW. Se halla actualmente en el sur del Golfo de Tonking entre Quangtri y Vinh.

Día 23, 5 p. m.: El centro de la depresión entra en la costa de Annam cerca de Donghoi en dirección á Vinh.

Día 24, mediodía: La depresión, dilatada y de poca profundidad, cuyo centro penetró ayer tarde en la costa cerca de Donghoi * * * se halla actualmente al W de Thanhhoa.

Del Observatorio de Hongkong se recibió en Phulien este aviso de tifón la tarde del 23:

Tifón en la parte sur del Golfo de Tonking, moviéndose al WNW.

El Observatorio de Zikawei envió también á las estaciones de la costa de China estos avisos de tifón:

Día 23, 2.30 p. m.: Tifón entre Paracels y Hainán, moviéndose al NW.

Día 23, 9 p. m.: Tifón en el Golfo de Tonking moviéndose al NW.

TIFÓN DE 25 DE JUNIO Á 1 DE JULIO, 1910.

Los mapas del tiempo de Filipinas de los días 25 y 26 parecen indicar la existencia de una depresión al este de Visayas y de Luzón respectivamente. El día 27 las observaciones de Aparri no dejaban lugar á duda de que un tifón cruzaba por el norte de aquella estación, moviéndose

al W ó WNW. Según esto, se envió este telegrama á Tokio, Zikawei, Taihoku, Hongkong y Phulien:

Día 27, 11 a. m.: Tifón en el, ó cerca del, canal de Balintang, moviéndose al W ó WNW.

La tarde del mismo día y la mañana del siguiente se trasmitieron otros dos telegramas en estos términos:

Día 27, 4 p. m.: Tifón en el, ó cerca del, canal de Balintang, moviéndose al W.
Día 28, 9 a. m.: Tifón al W del canal de Balintang, moviéndose al W.

El tifón se movió efectivamente muy inclinado al W desde mediodía del 27 hasta la mañana del 29, según podrán ver nuestros lectores en la trayectoria que publicaremos en el Boletín de Julio. La mañana del 29 empezó á inclinarse al N de una manera muy pronunciada al propio tiempo que disminuía notablemente su velocidad de traslación. El día 30 á eso de mediodía penetraba en el Continente al W de Hongkong, moviéndose casi al N.

Del Observatorio de Hongkong recibimos estos avisos de tifón:

Día 27, 1 p. m.: Tifón cerca del canal de Balintang, moviéndose al W.
Día 28, mediodía: Tifón al W del canal de Balintang, moviéndose al WNW.
Día 29, mediodía: Tifón al SW de Hongkong, moviéndose al WNW.
Día 30, mediodía: Tifón al W de Hongkong, moviéndose al NNW.

El Observatorio de Zikawei por su parte envió á las estaciones de la costa de China estos telegramas:

Día 27, 2.20 p. m.: Tifón lejos al E de Filipinas, moviéndose al NW.
Día 27, 4.40 p. m.: Tifón en el canal de Balintang, moviéndose al NW.
Día 29, 10 a. m.: Tifón al S de Hongkong, moviéndose al NW.
Día 30, 10 a. m.: Tifón al S de Hongkong, estacionario.
Día 30, mediodía: Tifón en la costa cerca de Macao, moviéndose al NW.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Air temperature.[2] Maximum.	Air temperature.[2] Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Evaporation.[2] Shelter, total.
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	757.88	27.7	33.2	23.8	29.5	31.1	29.4	29.7	29	28.3	83.3	22.8	3.1	2.3
2	57.66	28.1	34.4	23.7	30	31.6	29.7	29.9	29	28.3	78.3	21.9	3.7	2.9
3	57.29	27.5	33.5	24.2	30.1	31.1	30	30.1	29	28.3	84.1	22.8	2.7	2.1
4	56.74	27.7	33.5	23.7	30.1	30.8	30.1	30.3	29	28.4	78.2	21.3	4.1	3.2
5	57.88	28	33.6	23.3	29.6	31	29.9	30	28.9	28.4	79.2	22	3.6	2.8
6	58.78	28.2	33.9	23.6	29.9	31.1	30.1	30.3	29	28.3	77.9	21.8	4.9	4.1
7	58.87	28.1	33.6	23.2	30	31.4	30.1	30.3	29	28.4	76.7	21.4	3.8	3.1
8	58.77	27.9	34.5	23.6	30.3	31.7	30.2	30.4	29	28.5	79.7	22	3.6	2.8
9	58.49	28	34.3	22.9	30.1	31.9	30.3	30.5	29	28.5	77.8	21.6	3.8	3.3
10	59.02	28.7	34.5	24.3	30.7	32.2	30.5	30.8	29	28.5	75.7	21.8	4.5	3.6
11	59.99	27.6	32.4	23.6	30.6	31.3	30.5	30.6	29	28.4	77.9	21.2	3.6	2.9
12	60.16	26	31.3	23.9	30	30.1	30.3	30.2	29	28.5	87.7	21.8	.5	1.2
13	58.90	26.8	33	22.5	29.2	30.3	30	30	29	28.5	86.1	22.4	2	2
14	58.57	28.4	34.1	23.6	29.7	31.4	30	30.1	29	28.5	77	21.7	5	3.8
15	58.57	28.4	34.5	23.3	29.9	31.8	30	30.4	29	28.5	74.5	21.1	5.1	4.2
16	58.44	27	32	23.5	30.4	31.2	30.3	30.3	29	28.5	82.6	21.7	2	2.1
17	58.43	27.3	34.2	22.9	29.7	31.2	30	30.3	29.1	28.4	78	20.8	4.3	3.4
18	58.10	26.9	34.4	21.9	29.5	31.5	30	30.4	29	28.5	81.1	21.1	3.2	2.8
19	58.23	27.3	33.5	23.5	29.6	31	30.1	30.4	29	28.5	80.3	21.4	3	2.5
20	57.87	27	33	23.2	29.3	30.8	30	30.3	29	28.5	80.2	21.1	3.2	2.6
21	57.74	27.7	33.7	23.5	29.7	31.2	30.1	30.4	29.1	28.6	79.2	21.6	4.2	3.1
22	58.51	26.9	32	24.3	29.8	30.8	30.2	30.3	29	28.5	82.2	21.6	2.4	1.9
23	57.42	25.7	31.5	23	29.4	30	30.1	30	29	28.5	87.7	21.4	.9	1.1
24	56.83	26.6	33.1	23.4	28.8	30	29.7	29.8	29.1	28.5	85.9	22.1	1.6	1.5
25	57.07	26.1	32.8	23.8	29	29.8	29.7	29.9	29	28.5	89.6	22.4	2	1.6
26	56.86	26.7	33	22.3	29	31.6	29.8	30	29.2	28.5	85.4	22.1	3.2	2.5
27	56.75	26.3	31.2	23.9	29.5	30.2	29.8	29.9	29.1	28.6	87.2	22.1	1.2	1.6
28	57.21	25.8	31.7	23.6	29	30.3	29.7	29.8	29	28.6	89.8	22	1.6	1.4
29	57.38	26.1	33.7	22.6	28.6	30.3	29.5	29.8	29	28.6	88	21.8	1.9	2
30	57.40	26.6	32.7	23.3	29	30.1	29.6	29.6	29	28.7	87.2	22.4	2	2.1
Mean	758.06	27.2	33.2	23.4	29.7	31	30	30.2	29	28.5	82	21.8	3	2.6
Total													90.7	76.5
Departure from normal	+0.13	—0.7	+1.0	—0.5							+1.0	—0.6		

Date.	Wind. Prevailing direction.	Wind. Total movement.	Wind. Maximum hourly velocity.	Wind. Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Clouds. Prevailing form and its direction. Upper.		Clouds. Prevailing form and its direction. Lower.		Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0-10.*					*h.* *m.*	*mm.*	
1	ESE	111	16.5	WNW	7.4	Ci.-S.		Cu.-N.	SSE	8 00		☊ ≡ a. ⌐⌋ ☇ p.
2	SE quad.	169	23	W	4.8	Ci.	WbyS	Cu.	SE	8 35	14.7	☰° a. ⌐⌋ ● p.
3	W	96.5	15	W	6.4	Ci.-S.		Cu.	EbyS	6 10		☰° a. ☇ p.
4	SE quad.	167	18.5	SSE	4.2	Ci.		Cu.	ESE	9 15		☊ ≡ a. ⌐⌋° p.
5	SE	122	16.5	ESE	7.6	Ci.-S.		Cu.-N.	ESE	3 20		☰° ◯ᶜ a.
6	SE	194.5	17	SE	4.3	Ci.		Cu.	E	9 00		☊ ☰° a.
7	W quad.	135	13	WNW	5.4	Ci.-S.	SE	Cu.		7 45		☊ ≡ a. ☇ p. ○
8	W quad.	111.5	15	WNW	7.9	Ci.-S.	E	Cu.	E	6 35		☊ ☰° a.
9	ESE	131.5	11	ESE	6.1	Ci.-S.	SEbyE	Cu.	E	8 10	1.3	☊ ☰° ◯ a. ⌐⌋ ● p.
10	SE	146	17.5	SE	3.5	Ci.-S.		Cu.	SE	9 00		☊ ≡ a.
11	SE quad.	176.5	23.5	ENE	5.4	Ci.-S.		Cu.	E	4 10		☊ ☰° a. ☇ p.
12	E quad.	92.5	15.5	ESE	9.2	Ci.-S.		Cu.-N.		1 50	3.3	☰° a. ● ┬° a. p.
13	Variable	50.5	13.5	W	5.2	Ci.-S.		Cu.	SE	5 25	1.8	☊² ≡ a. ● a. p.
14	SE, ESE	137.5	14.5	SE	4.6	Ci.-S.		Cu.	E	9 45		☊ ☰° a.
15	SE	139	17	W	4.8	Ci.		Cu.	E	9 45		☊ ☰° a. ⌐⌋ p.
16	Variable	67.5	10	WNW	6.2	Ci.-S.		Cu.	ESE	5 05	1.5	☊ ☰° ● a. ⌐⌋ p.
17	ESE	142.5	19	ESE	6.2	Ci.		Cu.	E	7 20		☊ ☰° a.
18	NNE	136.5	16.5	WNW	6.3	Ci.		Cu.	E	7 50	10.7	☊ ☰° a. ┬ ● p.
19	NE, ESE	97.5	12.5	SE	7.9	Ci.-S.	NW	Cu.	ESE	4 50	8.3	☰° ● a. ☇° p.
20	ESE	123.5	18	NNE	8.1	Ci.-S.	NNW	Cu.	E	5 00		☊ a. ┬° ☇ p.
21	SE quad.	168	20	SE	7.8	Ci.-S.	SE	Cu.	ESE	6 30		☰° a. ⌐⌋ p.
22	Variable	76.5	9	NW	9.8	Ci.-S.		S.-Cu.	EbyS	0 55		☰ a.
23	NNE	107.5	16	NNW	8.8	Ci.-S.	ESE	N.	E	1 40	1.6	☰° a. d ● p.
24	NNE	90.5	16	NNE	8.8	Ci.-S.		Cu.-N.	ESE	2 45	1.1	d ☰° a. ●° ┬ p.
25	Variable	61	9	ESE	9.5	Ci.-S.		S.-Cu.	SE	1 45	.5	d ≡ a. ⌐⌋° ☇ p.
26	SE quad.	124	14	SSE	7.5	Ci.	SbyW	Cu.	E	7 15		☰° ◯ a. ┬ p.
27	SE quad.	107	12	S, WSW	9.8	Ci.-S.		Cu.-N.	SW	0 00	2.9	☰° ◯² a. d ⌐⌋ p.
28	ESE	126.5	20.5	SEbyE	9.9	Ci.-S.		Cu.-N.	S	0 40	21.5	☰° ◯ a. ● ┬ p.
29	SE, ESE	192	15.5	SSW	8.5	Ci.-S.	N	Cu.	SE	5 15	6.2	☰° ◯° a. ● ┬ ☇ p.
30	SE quad.	108	17	SW	7.9	A.-Cu.		Cu.	S	5 05	3.9	☰° a. ⌐⌋ ● p.
Mean		123.6	15.7		7					5 37		
Total										168 40	79.3	
Departure from normal		-107.8			+0.1					—5 00	—160.1	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3] Mean.	Maximum.	Minimum.	Relative humidity (mean).[3]	Wind.[3] Prevailing direction.	Force (mean).	Clouds.[3] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.36	27.9	34.8	24.3	77.9	SE	1.6	6.2	Ci.-S.	Cu.-N. E	------	d a.
2	57.17	27.7	32.5	22.6?	77.4	S quad.	1	7.4	Ci.-S.	Cu.-N. E	------	↙ p.
3	56.52	27.9	30.4	24.1	79.1	Variable	1	9.4	Ci.-S.	Cu.-N. E	6.5	d a. ⊤ ● ↙ p.
4	56.17	27.2	30.9	23.9	83.4	N quad.	1.6	9.2	Ci.-S.	Cu.-N. E	4.3	d a. ● a. p. ↙ p.
5	57.26	27.6	32.1	23.9	79.6	SE, NNE	1.4	7.6	Ci.-S. NW	Cu.-N. SW	------	↙ p.
6	58.17	27.9	32.5	24	75.1	NNE	1.6	8.4	Ci.-S., A.-S.	Cu.-N. SE, E	------	↙ p.
7	58.10	27.4	31.9	23.6	81	S quad.	1.4	8.4	A.-S. ESE	Cu.-N. E	------	d° a. ⊤° ↙ p.
8	57.94	27.8	30.9	23.9	80.6	NNE, SE	1.6	9.2	Ci.-S.	Cu.-N. NE	1.3	d p.
9	57.70	28	33.9	24.5	75.6	SE, NNE	1.4	7	Ci.-S.	Cu.-N. NE, E	2	d a.
10	58.12	27.7	32.5	24.1	73.6	SE	2.6	7.2	Ci.-S.	Cu.-N. NE, E	------	
11	59.14	26.7	31.4	22.6	79.5	N quad.	1.6	8.4	A.-Cu. SE	Cu.-N. E	------	⊤ a. p.
12	59.01	27.2	33.5	23.4	80.1	S quad.	1.4	7.6	Ci.-S. SSW, E	Cu.-N. E	2.3	d ↙ p.
13	57.77	28.1	33.1	24.4	75.5	SE	1.6	7.4	Ci.-S. SE, NE	Cu.-N. E	------	⌒ p.
14	57.76	27.6	33.1	24.1	77.1	NNE, SE	2.2	7.4	Ci.-S. SW	Cu. E	------	d° ⊤ ↙ p.
15	57.59	27	31.8	23.5	83	N quad.	1.2	8.2	Ci.-S. SW	Cu.-N. E	7.8	d a. p.
16	57.07	27.7	32.3	24	77.8	NE quad.	1	7.6	Ci.-S.	Cu.-N. E	------	
17	57.16	27	31	23.9	83.2	Variable	1	8.8	Ci.-S.	Cu.-N. E	77.2	●[2] a. d ⊤ ● p.
18	56.71	27.8	32.5	23.5	79.2	SE	1.6	8.6	Ci.-S.	Cu.-N. E	3.6	d° ↙ ⊤ p.
19	57.61	27.4	31.9	24.2	79.6	S quad.	1.4	9.8	A.-S.	Cu.-N. E	2	d° ● a. d ⌣ p.
20	57.60	27.2	31	24.8	81	SE	1.6	9.8	A.-S., Ci.-S.	Cu.-N. NW	31.5	⊤ ● p.
21	57.44	26.3	30.5	22.4	83.3	SE quad.	1.2	8.8	Ci.-S.	Cu.-N. SE, NE	3	● p.
22	57.02	26.9	32.2	23.7	84.3	S quad.	1.4	9	Ci.-S. NW	Cu.-N. E	1.8	⊤ d° p.
23	56.24	26.5	30.9	24	85	NNE, SE	1.4	9	Ci.-S. E	Cu.-N. E	13	
24	56.30	26.9	32	23.2	86	SE	1.6	9.6	Ci.-S. N, SW	Cu.-N. E	------	● a.
25	56.57	26.9	31.7	24.5	83.2	S quad.	2	9.8	Ci.-S. SE	Cu.-N. SW, E	.3	d° a. p. ⊤ ↙ p.
26	57.34	26.8	31.9	23.2	82	SE	1.4	9	A.-Cu., Ci.-S.	Cu.-N. SW	6.4	d° a. p. ● p.
27	57.49	27.4	32.9	25.4	80.7	SE	1.8	9.6	Ci.-S.	Cu.-N. NW	5.6	● a. d p.
28	57.72	26.9	32.3	23.9	79.4	SE	1.4	8.4	Ci.-S. NW	Cu.-N. SW	3.6	d° a ↙ p.
29	57.75	26.9	30.1	23.6	81	SE	1.6	8.6	Ci.-S.	Cu.-N. NNW, SW	------	p° a.
30	57.40	27.6	31.9	23.7	79.2	SE	2	9.4	Ci.-S.	Cu.-N. SW, W	32.5	⊤ ↙ ● p.
Mean	757.44	27.3	32	23.8	80.1		1.5	8.5				
Total											204.7	

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758	27.8	31.2	24.9	69.7	Variable	6.4	3.5	Ci.	Cu. ESE, E	0.3	☰° ☊[2] a. ●° p.
2	57.72	28.1	31.5	24.5	65.9	NE quad.	7.6	3	Ci.	Cu. ENE	------	☰° ☊ a.
3	57.10	27.8	31.4	24	67.8	NE quad.	9.2	5	Ci.	Cu. ENE	------	☊ a. d° ⌐◪ ⊤ ↙ p.
4	56.63	27.4	30.5	25.1	70.8	E	10.2	6.5	Ci.-S.	Cu. ENE	8.4	☊ ○ ↙ a. ● ⊤ p.
5	57.58	28	31	25	67.9	NE quad.	10.2	3.2	Ci.	Cu. E	------	☰° ☊ a. ↙ ⌐◪ p.
6	58.66	27.7	30.8	24.9	65.5	E	8.5	5.5	Ci.	Cu., S.-Cu. E	------	☊ a. ⌐◪ p.
7	58.52	27.6	31	24.5	67.8	E	10	4	Ci.	Cu. ENE	7.9	☊ a. ↙ ⌐◪ p.
8	58.53	27.3	30.6	24.5	71.7	NE quad.	7.6	7.7	Ci.-S.	Cu. ENE	------	● ○ a. ↙ ⌐◪ p.
9	58.24	27.9	30.6	25.5	66.6	NE quad.	10.1	3.3	Ci.	Cu. ENE	------	☊ a.
10	58.81	27.8	30.5	24.9	65.8	NE quad.	10.6	4	Ci.	Cu. E	------	☊ a.
11	59.56	27.5	30.9	24.3	68.4	E quad.	10.3	6.3	Ci.	Cu. E	------	☰° d a. ⌐◪ ↙ p.
12	59.55	27.9	30.5	24.7	67.1	E	9.4	4.2	Ci.	Cu. E	------	☊ a. ↙ p.
13	58.21	28.2	31	25.9	67.6	NE quad.	10.5	3.2	Ci.	Cu. E	------	☊ a. ⌐◪ p.
14	58.32	28.2	30.7	25.5	66.8	E	11.6	4	Ci.	Cu. E	4.6	☊ a. ● ⌐◪ ⊤ ↙ p.
15	58.34	28.1	30.7	24.6	66.2	NE quad.	11.7	3.7	Ci.	Cu. E	.8	☰° ☊ a. ↙° ⌐◪ p.
16	57.75	27.8	31	24.4	68	NE quad.	10	5.7	Ci.-S.	Cu., Cu.-N. E	------	☊ ●° a. ⌐◪ ⌣ p.
17	57.76	27.2	30	24.4	68	E quad.	9.8	7.5	Ci.-S.	Cu., Cu.-N. ENE	------	☰° ☊ a. ⌐◪ ∪ p.
18	57.53	27.8	31	24.4	65.5	E, NE	9.2	4.3	Ci.	Cu. ENE	23.1	☊ a. ↙ ⌐◪ ∞ p.
19	58.10	26.6	30	23.3	72.1	Variable	5.8	7.8	Ci.-S.	Cu.-N. E	2.5	☰° ● a. ↙ ⌐◪ ⌣ p.
20	57.87	25.7	30.5	23.9	77.8	NE	5.2	8	Ci.-S., A.-Cu.	Cu.-N. NNE, W	10.4	☊ ●° a. ●° ⌐◪ ↙ p.
21	57.68	26.7	30.4	23.8	75	NE quad.	7.2	5.8	A.-Cu. E	Cu. E	14.7	● a. p. ☰° a. ⌐◪ p.
22	57.55	27.4	30.5	23.6	69.7	NE quad.	9.3	6.3	Ci.-S.	Cu. ENE	.8	☊ ⊍ a. ●° ⌐◪ p.
23	56.76	26.8	30	24.8	74.1	NE quad.	5.9	8	Ci.-S.	Cu.-N. ENE	2.1	☊ ⊍ ⌒ a. ● ⌐◪ p.
24	56.60	27	30.5	24	71.9	SSE	4.9	7.2	Ci.-S., A.-Cu.	Cu., Cu.-N. s, ssw	------	d ● a. ⌐◪ ↙ p.
25	56.99	26.1	29.9	23.9	75.5	S	6.1	7.2	Ci.-S.	Cu.-N. SSW	8.6	☊ a. ⌐◪ ● p. ↙
26	57.34	26.6	30.2	23.4	70.7	SW	5.9	5.5	Ci.-S.	Cu., Cu.-N. SW	------	☊ a. ⌐◪ ↙ a. p.
27	57.71	27	30.5	23.9	70.7	S quad.	5.5	6.7	A.-Cu. ESE	Cu., Cu.-N. SSW	------	☊ a. ⌐◪ a. p.
28	58	25.8	29.9	23.2	75.3	SW	7	5.3	Ci.-S.	Cu.-N. SW	17.5	☊ ⊍ a. ● ↙ p. ⌐◪
29	58.07	25.6	28.8	23	75.2	Variable	5.9	7.3	Ci.-S.	Cu.-N. WSW	------	☊[2] ☰° a. ⌐◪ a. p.
30	57.88	25.5	29.1	22.9	74.8	Variable	5.1	7.3	Ci.-S.	Cu.-N. W, SW	39.6	⌐◪ ↙ a. p. ●[2] ⊤ p.
Mean	757.91	27.2	30.5	24.3	70		8.2	5.6				
Total											141.3	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

ILOILO.

[$\phi = 10°\ 42'$ N; $\lambda = 122°\ 34'$ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.93	27	31.6	23.8	82.7	SW	5.8	5.7	Ci.-S.	Cu. SE	0.3	● p.
2	57.50	28.6	34	24	71.6	NE	5.2	2.5	Ci.	Cu.	------	◟ a. p.
3	56.95	28.2	32.5	24	74	NE	9	7.3	Ci.-S.	Cu.	42.2	◟ a. p. ● ⌐◪ p.
4	56.50	27.6	32.4	23	79.5	NE quad.	10.6	7.3	Ci.-S.	Cu.	------	⌐◪ a. ⊤ ◟ p.
5	57.23	28.8	33.1	25.4	74.2	NE quad.	11	5.2	Ci.-S. E	Cu.	------	◟ a. p. ☊ a.
6	58.48	28.4	33.1	24.5	67.5	NE	10.6	5.3	Ci., Ci.-S.	Cu.	------	☊ a. ◟ p.
7	58.50	28.3	32.6	24.3	68.6	NE quad.	--------	6.2	Ci.	Cu.	------	☊ a. ◟ p.
8	58.43	27.8	32	24.4	74.8	ENE	10.4	6.2	Ci.-S., Ci.	Cu.	------	◟ a. p.
9	58.06	28.5	33.5	24.4	74.7	NE quad.	8.9	4.7	Ci. E	Cu. ENE	------	
10	58.52	28.6	33.1	24.8	68.3	NE quad.	11	1	Ci.	Cu.	------	◟ p.
11	59.26	27.4	31.5	24.8	77.3	NE quad.	10.7	7.8	A.-Cu. E	Cu. E	5.8	● ◟ p.
12	59.19	28.1	32.9	24.4	77	N	10	5.5	Ci., Ci.-S.	Cu.	------	⊤ ⌐◪ d ◟ p.
13	57.91	28.1	32.6	24.4	75.5	N	12.3	5.7	Ci.-S. E	Cu. NE	------	◟ p.
14	58.10	28.9	33.6	25.3	72.7	NE quad.	10.5	4	Ci.	Cu.	10.7	◟ a. p. ⊤ ● ⌐◪ p.
15	57.93	28.6	33.5	25	71.5	NE quad.	13	4.3	Ci.	Cu.	1.3	● ◟ p.
16	57.59	28.6	33.5	25.5	72.7	NE quad.	12.2	6.8	Ci., Ci.-S.	Cu.-N. ENE	------	◟ a. p.
17	57.63	28.2	32.6	24.7	73.2	NE quad.	12.3	7.8	Ci.-S.	Cu. E	------	◟ p.
18	57.31	28.8	33	25.2	70.7	NE quad.	12.9	8.3	Ci. E	Cu. E	------	◠ d ◟ p.
19	58.04	25.8	30	23.4	87.8	Variable	7.7	9.3	Ci.-S.	Cu.-N. E	14	d a. ⌐◪ ● ⊤ p. ◟
20	57.86	26.4	30.6	23.4	83	W quad.	4.6	9.7	Ci.-S., A.-Cu.	Cu. S	.3	●° ◟ p.
21	57.84	26.8	32	23.9	80.3	Variable	6.9	8.5	A.-Cu. E	Cu.	5.8	⌐◪ d ◟ ● p.
22	57.62	27.3	31.6	23.8	80.5	N	10	8.3	Ci.-S.	Cu. NE	2.8	⊤ d ◟ ● p.
23	56.77	26.6	31.6	24.1	86.2	N	6.3	9.8	A.-Cu. E	Cu.	10.9	d a. ⌐◪ ● p.
24	56.61	26.1	32.1	23.8	87.3	N	5.8	8.8	Ci.-S.	Cu.	.3	⌐◪ ◟ d p.
25	57.06	26.3	29.6	23.7	86.3	SW quad.	7.5	8.5	Ci.-S.	Cu.	.3	⊤ ● d p.
26	57.32	26	28.8	23.9	85.7	SW, W	9.4	8.3	Ci.-S.	Cu.	1.8	● a.
27	57.57	26.6	30.5	23.6	82.8	SW	10.4	7.8	Ci.-S.	Cu.	8.6	◟ ⌐◪ ● p.
28	57.97	26.5	29.5	23.9	83	W	10	9.3	Ci.-S.	Cu.	3	●° a. ◟ p.
29	57.98	26.3	29.9	23.9	83.2	W	7.2	8.3	Ci.	Cu.	1	● a. d ◟ p.
30	57.93	26	29.7	23.4	83.8	W, SW	8.3	9.5	Ci.-S.	Cu.	1.3	● a. p. ◠ a. ◟ p.
Mean	757.79	27.5	31.9	24.2	77.9	----------	9.3	6.9	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	110.4	

ORMOC.

[$\phi = 11°\ 00'$ N; $\lambda = 124°\ 36'$ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

	mm.	*°C.*	*°C.*	*°C*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.12	26.9	31.7	22.2	78.8	S quad.	4.3	3.5	Ci.-S. NE, N	Cu., Cu.-N.	------	☊ ≡° a. ◟ p.
2	57.84	26.5	32.3	20.9	77.7	N quad.	3.9	4.8	Ci., Ci.-S.	Cu. E	------	☊ a. ◟ p.
3	57.22	26.4	31.5	21.6	79.2	Variable	3.6	7.8	Ci.-S. E	Cu.-N.	0.8	☊ a. p ⊤ ◟ p.
4	56.75	27.3	32.5	22.9	78.9	SE quad.	3.4	8.3	A.-Cu. ESE	Cu.-N. E	.5	☊ ≡° a. ◟ d° p.
5	57.76	27.4	32.9	23.5	74.8	SE quad.	3.6	7.2	Ci.-Cu. E	Cu.-N. E	------	p ≡° a. ◟ a. p.
6	58.74	26	32.4	20	75.6	NE quad.	3.6	5.8	Ci.-S. S	Cu. E	------	☊ ≡° a. ◟ p.
7	58.66	27.2	32.4	21.4	76.2	N	4.3	6.2	A.-Cu. E	Cu., Cu.-N. E	.8	☊ a. ≡° ◟ p.
8	58.60	25.7	29.7	21.7	81	N quad.	3.3	8.8	Ci.-S.	Cu.-N. E	------	◟ ⊤ p. ≡° a.
9	58.57	27	32.7	22.5	74.5	SE quad.	4	6.2	Ci.-S. E	Cu.-N.	------	d° a.
10	58.97	27.4	33.5	20.6	67	NE quad.	3.9	4.7	Ci.-S. ESE	Cu. E	------	☊ ≡° a.
11	59.71	26.4	29.8	23.4	77	NE quad.	3.3	9.2	Ci.-S., A.-Cu.	Cu.-N. E	3	≡° ⌐◪ d a. ⊤ ◟ p.
12	59.58	27.1	33.8	22.7	76.8	NE quad.	3.5	6.5	Ci.-S.	Cu.-N. E	.3	◠ d° a. ◟ a. p.
13	58.39	26.7	32	22.5	79.5	SE quad.	2.6	6.5	Ci.-S.	Cu.-N. E	.8	≡° a. ◟ p.
14	58.77	26.6	31	22.5	77.1	SE quad.	3.2	6.8	A.-Cu. ENE	Cu.-N. E	------	d° a. ◟ ◡° p. ⊤
15	58.43	26.4	32.5	21.2	81.8	Variable	2.8	6	A.-Cu. SE	Cu.-N. E	1.8	☊° ⌉ ⌐◪ ≡° d ◠² ◟
16	58.10	27.3	33.6	22.4	73.7	SE quad.	3.1	8	Ci.-S.	Cu.-N. E	------	≡° a. ◟ p.
17	58.05	26.2	32.2	22	77.2	N quad.	2.7	9	A.-Cu. SE	Cu.-N. E	------	⌐◪ ° a. ⊤ ≡° d p.
18	57.76	25.5	30.9	22.4	87.1	N quad.	2.7	7.7	Ci.-S.	Cu.-N. E	23.9	⌐◪ ● a. ⌐ ◟ ∞ p.
19	58.27	25.5	30	22.3	86.7	SE quad.	2.4	10	Ci.-S.	Cu.-N. SEbyE	1.5	d° a. p. ◟ p.
20	58.10	25	29.9	22	88.7	N, S	2.4	10	A.-Cu. E	Cu.-N.	16	d ◟ ≡° ⌐◪ ⊤ ●
21	58.03	26.3	32	21.8	79.8	Variable	2.9	8.8	A.-Cu. E	Cu.-N. E	.8	≡° a. d a. p. ◟ p.
22	57.88	25.8	31	22.5	84.7	N	3	9	Ci.-S. SE	Cu.-N. E	1	●° ⊤ ⌔° p.
23	57.01	24.4	29.6	22	92.2	Variable	2.6	9	A.-Cu. SE	Cu.-N.	22.9	◠ ◠° a. ⊤ ⌔° ● p.
24	56.82	25	30.6	20.2	86.8	Variable	2.9	7.5	Ci.-S. N	Cu.-N. E	21.1	☊² ≡ a. ⌐◪ ● ◟ p.
25	57.21	25.8	30.4	21.8	85.5	N quad.	3	8.3	Ci.-S. SW, SbyW	Cu.-N.	3	⌔° ≡° a. ⌐◪ d° ◟ p.
26	57.67	25.1	31.9	22.5	88.6	NE quad.	2.8	9.3	A.-Cu. S	Cu.-N. W	5.1	◟ ≡ a. ⌐◪ p. ●°
27	57.82	25.7	30.8	22	87.6	N, S	2.6	8.2	Ci.-Cu. SE	Cu.-N.	1.3	⌐◪ a. d ◟ p. ≡°
28	58.24	25.9	30.4	22.3	85.2	S	2.4	5.8	A.-Cu. SE, ESE	Cu. E	1.5	≡° a. ◟ d p.
29	58.34	24	31.4	21.3	92	N quad.	2.3	8	Ci.-S. EbyS	Cu.-N.	26.7	☊ ⌐◪ a. ● p. ≡°
30	58.16	25	30.5	21.8	88.8	NE quad.	2.6	8	A.-Cu. NbyE, WSW	Cu.-N.	7.4	☊ ≡° a. d ◟ p.
Mean	758.12	26.1	31.5	22	81.4	----------	3.1	7.5	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------	140.2	

METEOROLOGICAL DATA, ETC.—Continued.

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.79	28.1	32	25.4	80.2	SE	0.5	5.8	Ci.-S. NW	Cu. ESE	0.8	●° p.
2	58.53	27.9	31.6	24.2	81	SE quad.	.7	4.3	Ci.-S.	Cu. E	6.3	● a. p. ↙ p.
3	58.09	27.4	32	25	84.3	Variable	.3	6.5	Ci.-S. NWbyW	Cu., Cu.-N. E	------	d a. ↙ p.
4	57.50	27.9	30.8	25	82.8	SSE	1	8.2	Ci.-S. NW	Cu.-N. E	2.8	● a. ↙ p.
5	58.66	27.5	31.5	24.3	84.7	SE quad.	1.3	7	Ci.-S.	Cu.-N. ESE	3.8	● ⌒ a.
6	59.49	28.1	33	23.9	77.3	Variable	1	5	Ci.-S. W	Cu. ESE	------	Ω² a. ○° a. p.
7	59.40	27.8	32.6	24.6	82	W quad.	.8	5.7	Ci. W, WNW	Cu. E	34	● ⊤ ↙ p.
8	59.62	25.9	27.6	23.8	88.9	NW quad.	.5	10		Cu.-N. ENE	1.3	●² ↙ a. ●° p.
9	59.32	27.8	31.5	24.9	78.8	ESE	1.2	6.5	Ci.-S. NW	Cu. ESE	------	
10	59.76	27.8	31.5	23.5	81	SE	.7	4	Ci.-S.	Fr.-Cu. ESE	------	Ω² a.
11	60.66	26	28.3	24.3	87.8	ESE	1	7.5	Ci.-S.	N. ESE	5.6	Ω² a. d ● a. p.
12	60.24	27.3	31.5	23.7	83.7	WNW ENE	.2	6.2	Ci.-S. NW	Cu. ESE	8.1	● ⊤ p.
13	59.08	27.4	31.5	24.7	85.7	W quad.	.3	6.3	Ci.-S.	Cu.-N. ESE	4.6	⌒ a. ● p.
14	59.60	25.8	29.9	23.8	89.5	SE quad.	.2	7.5	Ci.-S. NW	Cu.-N., N. SE	6	● d ⊤ a. ● p.
15	59.14	26.8	32.4	23.6	86.1	Variable	.7	5.5	Ci. NW	Fr.-Cu., Cu.-N. ESE	9.6	● ⊤ p.
16	58.80	27.6	32	24.5	82.5	E quad.	.8	7	Ci.-S. WNW	Cu. ESE	------	
17	59	25.6	28.5	23.8	87.2	NW quad.	.5	8.8	Ci.-S.	Cu.-N. ESE	2	● d a. p.
18	58.29	26.9	31.5	23.5	84.4	E quad.	1	6.2	Ci.-S. NW	Cu., Cu.-N. E	16	● a. p. d p.
19	59	27	30.5	24.2	84.2	ESE	.7	8.2	Ci.-Cu., Ci.	Cu.-N. E	.5	● d a.
20	58.47	26.5	32	23.5	87.3	E quad.	.5	8.5	Ci.	Cu.-N. ENE	8.4	○² a. ● ⊤ ⌐◪ p.
21	58.59	25.8	30.6	23	87.9	Variable	.5	9	Ci.-S. WSW	N., Cu.-N. E	17.5	d a. p. ● ⌐◪ p.
22	58.47	26.6	32	24.2	87.3	NW quad.	.7	8.3	Ci.-Cu. W	Cu.-N. ENE	12.2	● ⌐◪ p.
23	57.54	26	30.9	24	90.3	ENE	.3	8.2	Ci.-S. NW	Cu.-N. ESE	.8	d² a. p.
24	57.30	26.3	32.3	23.5	87.7	W quad.	.7	8	Ci.-S. NW	Cu.-N. S quad.	8.1	● ⊤ ∪² ⊽° p.
25	57.54	26.2	32.2	23.2	87.8	ENE	.2	8	Ci.-S.	Cu., Cu.-N. ENE	------	d ⊤ p.
26	58.21	25.8	31.5	23.2	90	NW quad.	1	8.7	Ci.-S. SW	Cu. ENE	17.8	d ●² p.
27	58.44	26.9	31.5	24	86	SE	1	7.5	Ci.-S.	Cu.-N. S	36.1	
28	58.61	26.9	31.3	23.6	83.8	SE quad.	.7	6.2	Ci.-S. WNW	S.-Cu. ESE	------	●² a.
29	58.80	26.1	30.5	23.3	87.7	ESE	.5	7.3	Ci.-S. NNW	Cu.-N. ESE	2.8	Ω² a. ● p.
30	58.55	27.1	31	24.2	84.8	Variable	.7	6.8	Ci.-Cu. NW	Cu.-N., Cu. ESE	------	
Mean	758.78	26.9	31.2	24	85.1	----------	.7	7.1	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	205.1	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.55	27.1	32.5	23.5	86.8	N	1	3.3	Ci. N	Cu.	------	↙ a. p. ⌐◪ p.
2	58.29	26.3	31.5	22.8	88.9	N	.5	3.2	Ci.-S.	Cu.-N. E	4.8	● ⊤ ↙ p.
3	57.97	26.6	31.6	23.4	87.2	N	.8	5.8	Ci.-S.	Cu. E	2	Ω a. ⌐◪ ↙ p.
4	57.48	26.8	32.2	23.6	85.2	Variable	.7	4.8	Ci.-S. NE	S.-Cu. E	------	↙ p.
5	58.49	26.8	32.5	23.4	86.8	N	1	3.7	A.-Cu., Ci.-S.	S.-Cu. E	9.7	d a. ● ⊤ p.
6	59.27	27.3	33.6	21.9	83.7	N	1	2.3	Ci.-S.	Cu. E	------	Ω² a.
7	59.24	27	32.6	23.2	84.8	N	1	4.3	Ci.-S.	Cu. E	28.7	Ω p² ⊤° ↙ p.
8	59.24	26.3	30.3	23.6	87.2	NNW, E	.7	7.5	Ci.-S.	S.-Cu. E	------	d a. ↙ p.
9	59.10	27.3	32.2	23.8	81.7	N	1.2	5.3	Ci.-S.	S.-Cu., Cu. ESE	------	↙ a.
10	59.48	27.2	32.9	21.8	83	N	1.2	3	Ci.	Cu. E	------	Ω a. d p.
11	60.47	25.6	32.7	23.3	90.5	N	1	5.5	Ci.-S	S.-Cu. ESE	15.7	p² ⊤ a. ●° d ↙ p.
12	60.16	27.3	32.9	22.6	81.7	NE quad.	1.3	4.5	A.-Cu. S	S.-Cu., Cu. E	------	↙ a.
13	59.02	26.4	31.7	23.5	88	N	.7	5.2	Ci.-S.	S.-Cu. E	------	d ⊽ p.
14	59.28	25.9	32	23.1	87.8	N	1	3.7	Ci.-S. SE	S.-Cu., Cu. E	3.6	⌐◪ a. p° ↙ ⊤° p.
15	59.06	26.3	32.2	22.6	88.2	NE quad.	.8	4.8	Ci.-S.	Cu.-N. E	2.3	Ω d° ⊤ ⌒ ⊽ ↙
16	58.58	27	32.4	22.6	86.3	N quad.	1	5.7	Ci.-S.	S.-Cu. E	7.9	Ω ● a. ↙ ⌐◪° p.
17	58.74	26	32.4	22.7	87.5	N	1.2	6.8	Ci.-S. S	N. ESE	.5	Ω ≡ a. p d° ∪ p.
18	58.40	24.9	30.5	22.6	91.8	N	.7	7.7	Ci.-S. S	S.-Cu. E	27.4	p² ●° ⌐◪ d ↙ p.
19	58.62	26	30.4	23.5	90.2	N quad.	1	8.7	A.-Cu. SE	S.-Cu. E	26.4	p° ● a. ⊤ ●° ↙ p.
20	58.44	25.3	30.4	22.7	90.8	N quad.	.8	8.8	Ci.-S.	S.-Cu. E	------	⊤° p.
21	58.39	25.8	30.7	22.6	90	N	.8	7.5	Ci.-S.	N., S.-cf. E	6.4	⌐◪ d² ● ⊽ ↙ p.
22	58.36	25.7	30.7	23.1	91.2	N	.7	7.8	A.-Cu. SE	S.-Cu. E	3.3	●° ⌐◪ d° p.
23	57.36	25.6	30.4	23.7	92.2	N	.7	9	A.-Cu.	S.-Cu. E	14.7	d a. p° ⊤ ● p.
24	57.11	27	33	23.1	85	Variable	1	6.7	A.-Cu.	S.-Cu. ESE	2.3	⊤ ●° ↙ p.
25	57.22	26.7	31.9	23.1	87.6	N	1	6.3	Ci.-S.	S.-Cu. WNW	8.9	d° ↙ p.
26	57.81	26.1	30.6	24.3	89.7	W quad.	.8	8.8	A.-Cu.	S.-Cu. W	5.6	●° a. p. ⊤ ↙ p.
27	58.17	26	31	22.8	87.7	S	.8	7.5	A.-Cu. SE	N. SE	------	d ↙ p.
28	58.43	26.3	30.9	22.9	85.5	N	1	5.5	Ci.-S. SE	N. E	2	∪ a. ⊤ ●° ⌒ p.
29	58.57	25.2	31.1	22.2	89	N	.8	6.7	Ci.-S. SE	S.-Cu. E	------	d p.
30	58.34	26.7	30.8	22.7	83.8	N, S	.8	7.3	A.-Cu. E	S.-Cu. E	------	⊤ a. ↙ p.
Mean	758.59	26.4	31.7	23	87.3	----------	.9	5.9	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	172.2	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.15	27.8	32.5	23.7	80.3	E	6.3	2.2	Ci.	Cu. S	------	↙ p.
2	58.10	28.6	32.8	24.9	77.2	E	8.9	2.8	Ci.	Cu.	------	↙° p.
3	57.76	28.8	33.3	25.5	74.8	E, ENE	9.6	3.2	Ci. W	Cu.	------	↙° p.
4	57.28	28	32.4	24.5	77.2	E, ENE	9.5	2.5	Ci.	Cu. E	2.5	d° a. ↙ p.
5	58.30	28.5	32.7	25.1	77	E	11.6	2	Ci.	Cu. SE	------	●° a. ↙° p.
6	59.20	28.1	31.9	25.1	78.8	NE quad.	7.2	3	Ci.	Cu. ESE	12.2	● a. ↙° p.
7	59.20	28.4	32	23.9	77.8	ENE	7.1	4.8	Ci. SW	Cu.	------	↙° p.
8	59.05	28.4	32	24.5	74.4	E quad.	10.6	6.7	Ci. SSE	Cu ENE, E	------	↙° p.
9	58.90	28.7	32.1	25.4	75.2	E	10	5.5	Ci.	Cu. E	1	↙ p.
10	59.47	28.7	32.4	25.1	75.7	E	11.7	2.3	Ci.	Cu. E	19.3	↙° p.
11	60.27	27	30.6	23	81.8	E, NE	10.9	7	Ci.-S.	Cu.-N. E	6.9	● a. ●° p.
12	60.05	28.4	31.8	24.6	76.7	E	10.5	2.5	Ci.	Fr.-N. SE	5.1	d° a. p.
13	59.05	27.7	32.1	25.1	82.5	E	9.7	6	Ci.	Cu.-N,Fr.-N,NE,ENE	9.3	● a. p.
14	59.08	28.2	32.5	24.6	77.6	E	6.6	2	Ci.	Cu. NE	------	d° p.
15	59.02	28.4	32.6	23.6	77.5	E quad.	7.7	2.8	Ci.	Cu. E, NE	11.7	●° ↙ p.
16	58.72	27.9	32.4	22.5	80.2	NE quad.	9.7	6.2	Ci.	Cu. NE	25.6	p a. ●² ↙ p.
17	58.53	28.8	32.2	24.8	73.3	E, ENE	10	5.2	Ci.-S., Ci.	Cu.-N., Cu. NE, E	------	d° a. ↙ p.
18	58.03	28	32	24.9	78.5	NE	10.1	8.3	Ci.-S. SW	Fr.-N. E	15.2	●° a. p.
19	58.55	28.1	32	23.1	76.6	E	10.6	7	Ci.-S. NW	Cu.-N. NE	.3	●° a. d° p.
20	58.04	27	32	23.3	84.7	ENE	5.2	8.7	Ci. NW	Fr.-N. ENE	13.8	┬ ● ↙ p.
21	58.24	27.5	31.6	23.6	79.7	E quad.	6.6	8.5	Ci.-S.	Cu. E	1.5	d° a. p.
22	58.32	26.8	31.1	24.8	85.2	E	6.6	9	Ci.-S.	Fr.-N. E	47	● a. p.
23	57.11	26.3	31.1	24	88.4	E, NE	4.7	9.8	Ci.-S.	Fr.-N. E	20.9	● a. p.
24	56.86	27.2	30.7	23.9	84	ENE	4.9	6.7	Ci.-S., Ci.	Cu.-N. ENE, NE	8.3	● a. ↙ p.
25	56.87	27.2	32	23.4	81.9	SE	2.1	7.7	Ci.-S.	Cu. ENE	------	d² ⌐◪ a. ↙° p.
26	56.97	25.8	32.5	23.1	88.5	W	1.5	8.5	Ci.-S.	Cu. W	7.6	● a. d ↙ p.
27	57.53	26.8	31.5	23.5	82.3	Calm	.9	7	Ci.-S.	N., Cu. S	3	◯ d a. ↙ ● p.
28	58.10	25.6	32	23.5	90	S	1.9	6.2	Ci.-S.	Cu. S	3	⌐◪ ●° ↙° p.
29	58.01	26.5	31	22	83.2	E	4	6	Ci.-S. NW	Cu. S	------	↙° p.
30	57.85	26.8	31	23	80.3	E, SE	2.7	8.8	Ci.-S. NW	Cu.	------	↙ p.
Mean	758.35	27.7	32	24.1	80	----------	7.3	5.6	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	214.2	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.96	28	32.4	24.6	85	NNW	6.8	8.2	A.-Cu. SE	S.-Cu. SE	------	↙ d² a. ⌐◪ p.
2	57.94	27.1	32.9	24.4	88.3	SW	7.6	5.3	Ci. ENE	Cu. SE	3.6	☋☊²≡°◯°●⌐◪°↙
3	57.54	28.1	31.5	24.1	81.7	Variable	--------	6.2	Ci. NE	Cu. SE	------	◯° a. d ↙ p.
4	57.06	28.6	33.2	24.4	79.3	N quad.	11.2	4.7	Ci. NNE	Cu. NE, SE	------	↙ p.
5	58.17	28.7	34.2	25.2	80.7	Variable	7.1	4.3	Ci.	Cu. SE	3.6	↙ ☊ ⌐◪° a. ● ⌐◪ p.
6	59.01	28.9	32.9	24.9	80.5	NE quad.	11.4	3.8	Ci.	Cu. SE	------	☊° ≡° a. ┬ ↙ p.
7	58.91	28.5	33.5	24.8	74.8	Variable	7.6	6.3	Ci. E	S.-Cu. NE, SE	------	◯° a. ↙ p.
8	58.79	28.4	32.8	24.4	80.7	N quad.	10	7.2	Ci. E, S	Cu. NE	------	↙ ☊° ◯² a. ⌐◪ p.
9	58.43	29.5	34.5	25.8	74.2	E quad.	8.2	5.2	Ci.	Cu. SE	------	↙ d a. d² ⌐◪ ↙ p.
10	59.24	28.3	33.6	23.3	82.7	NE, SW	11.4	4.2	Ci.	S.-Cu. NE	------	☊°≡°a. ⌐◪°d° ↙ p.
11	60.01	27.9	33.9	24	79.3	SW	9.1	4.8	A.-Cu. E	Cu. E	4.3	⌐◪ ● ↙ p.
12	60.41	25.6	33.5	23.5	91.7	NE quad.	7.4	7.2	Ci.-Cu. SE	Cu. SE	60.9	⌐◪ ●² p.
13	58.93	27.9	31.7	24.2	83.3	NE	12.4	5.5	A.-Cu. ENE	S.-Cu. NE	1	d a. ⌐◪ ●° ↙ ☋° p.
14	58.90	27.9	33.4	24.3	81.7	SW	6.8	3.3	Ci. ENE, E	Cu. SE	2.3	↙ ☊² ≡° a. ⌐◪ ● p.
15	58.87	28.2	32.7	23.5	82	NE	13.8	4.2	Ci.	Cu. NE, E	1.3	☊² a. ↙ ●° p.
16	58.68	28.6	33.1	25.2	79.8	Variable	11.6	6	Ci.	Cu. NE, E	16.2	◯² a. ⌐◪ ● ↙ p.
17	58.53	28.9	33	25	79	NE, SW	11.7	6	Ci. SW	Cu. E	------	d a. ⌐◪ d° ↙ p.
18	58.27	29.2	31.7	27.2	79	NE	17.8	7	Ci.	S.-Cu. NE	.5	⌐◪° d² ↙° ☋° ⌣ p.
19	58.46	27.9	32.1	24.9	80	E quad.	11	7.8	Ci.	S.-Cu. NE, E	------	↙° a. ⌐◪°d² ↙° ⌣² p.
20	58.01	27.8	32.7	24	83.5	NE, SW	11.2	9.3	A.-Cu. SW	S.-Cu. NE	------	↙ a. ⌐◪° ↙ p.
21	58.11	26.6	31.2	24.5	88.3	SW	--------	9.7	Ci., Ci.-S.	S.-Cu. SE	13.8	⌐◪° ● a. p. ↙ p.
22	58.61	27.2	30	24.2	86.5	NE	14.7	9.3	Ci.-S.	S.-Cu. NE	3.3	↙ a. ⌐◪ d² ↙ ☋° p.
23	57.42	27.2	29.5	25.4	87.7	N quad.	18.7	9.7	Ci.-S.	S.-Cu. NE	2.8	● ⌐◪° a. d p.
24	56.93	27.8	31.4	24.5	83.2	N quad.	10	7	Ci. E	S.-Cu. NE	2	⌐◪°a. ●° ⌐◪² ↙ ☋° p.
25	57.27	26.6	30.2	24.3	85.6	SW, NW	8.1	8	A.-Cu. ESE	S.-Cu. Variable	1.8	☋° ⌐◪°a. ⌐◪●° ↙ p.
26	57.10	26.4	32.2	23.3	88.5	SW	7.8	7.7	Ci. S	S.-Cu. W, NW	2	↙ a. ⌐◪ ↙ ●° p.
27	56.88	26	29.3	23.9	88.5	SW quad.	7.3	9.2	Ci.-S.	S.-Cu. SE	10.7	●° a. p. ↙ p.
28	57.26	26.7	30.9	24.2	84.5	S quad.	6.2	9.8	Ci.-S., Ci.	S.-Cu. S	12.2	d² ⌐◪ a. ● ↙ p.
29	57.54	26.6	32.4	23.5	84.6	S quad.	8.1	9.5	A.-Cu. SE	S.-Cu. SE	11.9	d ⌒ a. ⌐◪° ● ↙° p.
30	57.39	27	33.3	23.4	84.8	SW	7.7	7.7	Ci. W	S.-Cu. SE	11.7	☋² ≡ a. ⌐◪ ● ↙ p.
Mean	758.22	27.7	32.3	24.4	83	----------	10.1	6.8	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	165.9	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.76	27.4	34.2	23.6	83.8	E quad.	1	6.3	Ci.-S. NE	N. SE	0.8	☊² a. ⊤ d° p.
2	57.51	28.5	35	24.1	79.2	S quad.	1	6.8	Ci.-S. NNE	Cu.-N. SE	7.6	☊² a. ● ⌐◪ p.
3	57.30	28.2	33.7	24	78.7	E quad.	1.5	6	Ci. N	Cu. E	------	☊² ≡ p. ⌐◪ p.
4	56.85	28	32.6	23.2	73.1	E quad.	2.2	4.5	Ci.-Cu. NE	Cu. E	------	☊² ↘ p.
5	57.97	27.6	31.6	22.9	76.3	E	1.8	4.8	Ci. . NE	Cu. E	------	
6	58.79	28.4	33.6	23.4	70.3	E	1.5	4	Ci.	Cu. ESE	------	☊² a.
7	58.73	28.9	35.3	23.1	74	NE, SE	1	4.7	Ci.	Cu. ESE	------	☊° a. ↘ p.
8	58.74	28.2	34.3	24.5	75.8	E quad.	1.2	6.2	Ci. NE	Cu. ESE, E	------	☊² a. ↘ p.
9	58.48	28.2	33.4	23.4	77.7	ESE	1.5	6.2	Ci. NE	S.-Cu. SE	2	☊² a. ⌐◪ d² p.
10	58.95	28.9	33.7	24	72.2	ESE	1.7	4	Ci.	Cu. E, SE	------	☊² ≡ ⊕² a. ↘ p.
11	59.94	28.5	33.4	23.5	71.8	E quad.	2	3.8	Ci.-S. S	Cu.-N. E	------	☊² a. ↘ p.
12	60.17	26.6	31.6	24.5	84.3	NE quad.	1	7.3	Ci.-S.	N. E	6	d° ☾² a. ● p.
13	58.86	28.3	33.8	22.5	73.9	NNW, SE	1.7	4.5	Ci. SE	Cu. E	------	☊² ≡ d a. d° p.
14	58.53	29.1	32.9	24.5	71.9	E	2.2	4.2	Ci.	Cu. ESE, SE	------	☊² a.
15	58.36	29.4	34.4	25.4								
16	58.44	28.3	33.1	23.9	74.2	ESE, NE	1.2	5	Ci.-S.	Cu. ESE, E	------	☊° a. d° ⌝ ◡² p.
17	58.57	27.5	32.3	22.9	74.3	NNW, SE	1.5	5.5	Ci.-S. SSE	Cu. E	------	☊° ⌐◪ a.
18	58.19	27.4	33.4	22	75.8	NW	2	6.8	Ci.-S., Ci.	Cu. E	3	☊° a. ⊤ ☽° ● ↘ p.
19	58.06	28.3	33.2	23.4	73	E	2.2	6.7	Ci., A.-Cu.	N. E	------	◡° ↘ p.
20	57.70	28.4	32.9	23.6	71.3	E quad.	2.2	7.2	Ci.-S.	Cu. E	------	☊° a. ◡² p.
21	57.88	27.7	31	24	75.3	E quad.	2.2	8.2	Ci.-S.	Cu. E	------	⌐ a. ◡² p.
22	58.37	27.6	31.9	23.1	74.1	SE quad.	1.3	8.3	Ci.-S.	N. SE	------	⊕² a. ↘ p.
23	57.50	26.1	29.2	23.2	83.3	NE quad.	1	8.5	Ci.-S. SE	N. E	4.8	☊° d° a. ● ♉² p.
24	56.74	27.4	32.7	23.9	79.2	ESE	1.3	7.2	Ci.-S. SW	Cu. E	1.3	●° a. ⊕² d ♉² ⌐◪ p.
25	56.86	26.9	32.2	22.9	79.2	SE quad.	1.2	7.3	Ci.-S. S	N. SE	------	☊° ⊕° a. ♉² ↘ p.
26	56.77	27	34.7	22.5	79.7	SE quad.	1.8	7.2	Ci.-S., Ci.	Cu., N. SE, S	------	☊² a. ⌐◪ p.
27	56.76	25.3	29.7	23.4	88.3	SE quad.	.8	9.8	Ci.-S.	N. SW	8.9	☊° a. ⊕² ● ⌐◪ p.
28	57.14	26	31.8	23.3	87.3	SE quad.	1.8	9.8	Ci.-S.	N., S.-Cu. S	13	☊² ☾² a. ● d° p.
29	57.10	26	32.6	22.5	86.2	SE quad.	1.3	8.8	Ci.-S.	N. S	23.9	◡² ☊° ☾° a. ●² ⌐◪ p.
30	57.24	26.8	32.5	23	82.8	SSE	1.3	8.3	Ci. NW	Cu.-N., N. S	.3	◡² ☾² a. ⊕² ↘ p.
Mean	758.01	27.7	32.9	23.5	77.5		1.5	6.5				
Total											71.6	

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.72	28.4	35.9	24.4	82.2	SE quad.	7.4	8	A.-Cu.	S.-Cu.	2	◡ ≡ a. ●° ↘ ⊤ p.
2	57.39	28.9	35.6	24.9	79.7	S quad.	10	7.2	Variable	Cu. SE	------	⊤ ↘ p.
3	57.32	29.1	36.1	24.2	78.3	SE	10.8	6.5	Ci.	S.-Cu.	------	☾ ↘ d° p.
4	56.72	29.3	36.2	24.1	77.2	SE, SSE	8.9	5	Ci.	Cu., S.-Cu.	------	↘ p.
5	57.74	29	36.1	23.7	76.2	SE, NE	10.8	3.7	Ci.	Cu., S.-Cu.	------	
6	58.64	29.5	36.4	24.9	74.3	SE	8.8	2.5	Ci.	Cu.	------	⊤ p.
7	58.68	29.6	36.1	24.4	72.8	SE, NW	10	2.7	Ci., Ci.-S.	Cu.	------	↘ p.
8	58.60	29.3	36.2	25.3	76.7	SE, NW	9.9	7.3	Ci.	Cu., S.-Cu.	------	↘² d° p.
9	58.31	28.9	36.6	24.4	74.3	SE quad.	11.3	5.2	Ci.-S.	Cu.	.5	↘² d ⊤ p.
10	58.90	29.5	36.6	24.2	74.3	SE, SSE	11.6	4	Ci.	Cu.	------	
11	59.66	29.2	36.8	24.5	75.5	S quad.	9.7	3.2	Ci.	Cu.	1.3	↘ ⌐◪ ●° p.
12	59.75	28.1	35.6	24.3	77.5	SE	11.3	5.7	A.-Cu.	S.-Cu.	------	⊤ p.
13	58.72	28.4	35.4	23.3	78	Variable	10	3.7	Ci.	Cu.	3.3	↘² ⊤ ●° ◠ p.
14	58.37	29.1	36.9	24.7	77.3	SE quad.	10.9	4.2	Ci.	Cu., S.-Cu.	12.2	⊤ a. ↘² ⊤ p p.
15	58.38	29.3	36.6	23.8	75.2	SE, N	9.7	2.8	Ci.-S.	Cu.	------	
16	58.24	29.2	36.4	24.8	77.7	Variable	8.5	5	Ci.-S.	Cu., S.-Cu.	------	d ⌐◪ ↘ ◠ ◡° ♉ p.
17	58.26	27.2	35.8	22.8	81.7	SE	9.1	6	Ci., Ci.-S.	Cu., S.-Cu.	21.3	⌐◪² p ◡ ♉ p. ↘
18	58.01	27.3	35.9	22.6	83.3	SE	8.2	6.3	Ci.-S.	Cu., S.-Cu.	36.3	⊤² ↘ p ● p.
19	57.98	28.2	36.1	23.6	81.2	SE quad.	10.5	6.8	Ci.	Cu.	.5	p° ⌐◪ p.
20	57.68	28.2	34.6	24.4	83.8	SE quad.	7.7	8.3	Ci.-S.	S.-Cu.	13	⌐◪² ↘ p p.
21	57.46	28.2	33.5	24.8	78	S, SE	11.6	10	Ci.-S., A.-Cu.	S.-Cu.	------	↘° a. ◡° ♉ p.
22	58.21	29.2	35.8	24.3	76.3	SE	8.6	7.7	Ci.-S., A.-Cu.	S.-Cu.	------	
23	57.50	27	32.8	24.6	88.5	Variable	7.6	9	A.-Cu.	N. SE	9.1	↘ a. p ⌐◪ ♉ p.
24	56.56	27.8	36.6	23.4	83.9	S quad.	9	8.7	Ci.	S.-Cu. SE	2.3	⊕ p ⌐◪ ↘ d ♉
25	56.76	26.3	35.2	23	90	SE	7.1	6.7	Ci.	S.-Cu., N.	18.1	♉ a. p ⊤° ● ↘ p.
26	56.70	27.2	33.8	22.9	87.5	NW	8.7	7	Ci.	Cu., N.	39.6	♉ a. ● ⌐◪ ↘ p.
27	56.36	25.8	29.1	23.4	91.5	SE	11.2	10	Ci.-S., A.-Cu.	S.-Cu. SE	------	● a. d° ↘° p.
28	56.43	26.2	32.1	23.9	87.6	SE	17.3	10	A.-Cu.	S.-Cu., N. SE	2.8	d° ⊤ p.
29	56.47	27.3	33	23.8	82.3	SE	18.3	9.7	Ci.-S., A.-Cu.	S.-Cu. SE	------	◡ ♉ ◯ a. ◠ ⊤ p.
30	56.83	26.1	32.5	23.9	88.3	SE	12.9	9.3	A.-Cu.	N. SW	9.7	p ⌐◪ ↘ p.
Mean	757.81	28.2	35.2	24	80.4		10.2	6.4				
Total											172	

METEOROLOGICAL DATA, ETC.—Continued.

BOLINAO.

[$\phi = 16°\ 24'$ N; $\lambda = 119°\ 53'$ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*0–12.*		*0–12.*	*0–10.*			*mm.*	
1	757.53	28.1	32	24.4	84.8	W	1.3	9.8	Ci.-S.	Cu.-N., S.-Cu.	28.7	☌ ≡° a. ⌐◪ ●² ◠ p.
2	57.34	27	31	24.3	90.8	SE quad.	1.2	9.2	Ci.-S.	Cu.-N.	25.6	≡° a. ⌐◪ ◠ ◟ p. ●
3	57.08	28.3	32.4	23.4	82.5	WNW	1.7	9.5	Ci.-S.	Fr.-Cu. NW	1.3	☌ ≡° a. ⌐◪ ◟ p.
4	56.51	29.2	34.9	25.4	81.2	SE quad.	1.7	8.7	Ci.-S.	Cu.-N., Cu.	3.6	☌ ≡° ● a. ⌐◪ ◟ p.
5	57.49	28.8	34.1	24.2	78.5	Variable	1.8	8.7	Ci.-S.	Cu.-N., Cu.	22.4	☌ ≡° a. ◠ ⌐◪ ●² p.
6	58.30	29.1	34.1	24.6	79.8	E quad.	1.8	6	Ci.-S.	Cu.	11.2	☌ ≡° a. ┬ p. ◟
7	58.55	29.3	33.9	24.7	79.8	Variable	2.3	5.3	Ci., Ci.-S.	Cu.-N., Cu.	------	☌ ° ● a. ⌐◪ ◟ p.
8	58.42	29.3	33.9	25.9	80.2	Variable	1.5	7.8	Ci.-S.	Cu.-N., Cu.	------	☌ ≡° a. ⌐◪ p. ◟
9	58.05	29.4	34.1	25.5	79.3	SSE	2.5	6.5	Ci.-S.	Cu.	------	☌ ≡° a. ⌐◪ ◟ p.
10	58.78	29.5	34.1	25.5	78.4	S quad.	2.5	7	Ci.-S.	Cu. SbyE	------	☌ ≡° a. ◟ a. p.
11	59.39	29.4	35.5	24.9	77	SE quad.	2.3	4.7	Ci., Ci.-S.	Cu.-N., Cu.	------	☌ ≡° a. ⌐◪ ◟ p.
12	59.46	28.9	36.1	25.4	79.2	SE quad.	2.3	7.2	A.-Cu.	Cu.-N., S.-Cu.	------	☌ ≡° a.
13	58.45	29.4	34.9	24.8	75.8	NNE, SE	2.8	4.8	Ci.-S., A-Cu.	S.-Cu., Cu.	1.8	☌² ≡° a. ⌐◪ ┬ p.
14	58.21	28.9	35.5	24.7	79.7	SE quad.	2.3	6.5	Ci.-S.	Cu.-N., Cu.	24.9	⌐◪ ● a. ●² ⌐◪² ✓° p.
15	58.14	29	34.5	24.6	81.8	SE quad.	2.7	4.5	Ci.-S.	Cu.-N., Cu.	------	┬ p. ◟ a. p.
16	58.06	29.2	34.5	24.1	77.8	SE quad.	1.7	4.8	Ci.-S.	S.-Cu., Cu.-N.	------	☌² ≡ a. ⌐◪ ◡° p. ◟
17	57.98	27.9	33.9	24.1	80.5	SSE	1.7	10	Ci.-S.	Cu.-N.	3	✓° ◠ ² ●° ◟ p. ⌐◪
18	57.89	28.6	34.4	23.9	78.7	SE quad.	2	7.5	Ci.-S.	Cu.-N., Cu.	1.3	☌ ≡° a. ●° ⌐◪ p. ◟
19	57.79	28.6	34.8	24.1	77.1	SSE	2.2	9.5	Ci.-S.	Cu.-N., Cu.	4.3	☌ ≡ᶜ a. ⌐◪ d ● p.
20	57.39	28.1	33.5	24.5	81.3	NNE	1.7	8.5	Ci.-S.	Cu., Cu.-N. E	------	☌ ≡ᶜ a. ⌐◪ ◡° p. ◟
21	57.26	27.9	33.6	23.8	81.8	SE quad.	1.8	10	Ci.-S.	Cu.-N.	------	☌ ≡° a. ┬ ◟ a. p.
22	58.06	28.7	34.6	23.9	78	SE quad.	2	7.7	Ci.-S.	Cu. S	22.4	☌° a. ┬ ◟ p.
23	57.35	26.6	31.5	23	87.3	NW quad.	1.5	10	Ci.-S.	Cu.-N.	2.8	✓° ⌐◪² ● a. ⌐◪ ●° p.
24	56.49	26.8	33	23.2	84.2	S quad.	2.8	10	Ci.-S.	Cu.-N., S.-Cu.	72.6	☌ ° a. ✓° ⌐◪² ●² ◟ p.
25	56.50	27.2	33.4	23.9	87.1	SSE	1.8	8	Ci.-S.	Cu.-N., S.-Cu.	4.6	☌° a. ⌐◪ ●° ◟ p.
26	56.48	27.1	31.8	23.7	85.8	SSE	1.5	9.5	Ci.-S.	Cu. S	25.4	◡° ☌ a. ⌐◪ ● ◟ p.
27	55.79	26.6	30.9	24	88.2	SE quad.	2.2	10	Ci.-S.	Cu. SE	.5	◯² ●° ┬ ◟ p.
28	55.76	26.2	30.5	24.3	88.6	SE quad.	3.7	10	Ci.-S.	N.-cf. SSE	3.5	◟ a. ✓° ● ┬ p.
29	55.92	27	32	24.4	83	S quad.	4.7	10	Ci.-S.	Cu.-N.	5.8	⌐◪ ● ◟ p. ✓° a. p.
30	56.40	25.5	30.7	23.9	89.7	S quad.	3.8	10	Ci.-S.	Cu.-N.	1.1	☌ ≡° a. ◟ p. ⌐◪ ●°
Mean	757.56	28.2	33.5	24.4	81.9	----------	2.2	8.1	----------	----------	------	
Total	--------	------	------	------	-------	----------	---------	----------	----------	----------	266.8	

BAGUIO.[1]

[$\phi = 16°\ 25'$ N; $\lambda = 120°\ 36'$ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	636.08	19.2	24.3	16.8	83.3	SE quad.	12.1	7	A.-Cu. W	Cu. SE	11.4	┬ ⌐◪² ● ◠² p.
2	36.16	19.4	24.3	17.1	84.2	SE	14.2	6.9	A.-Cu. W	Cu. SSE	------	┬ ≡° p.
3	35.86	19.5	24.5	16.8	83.5	SE	16.7	6.1	A.-Cu. NW	Cu. SE	34.5	≡ ● ┬ ⌐◪² d² p.
4	35.48	19.8	25.2	16.2	85.2	E, SE	11.8	6.1	Ci. NE	S.-Cu. ENE	------	≡² p.
5	36.37	19.2	25.1	16.9	84.5	E quad.	19.6	5.3	Ci.	Cu. SE	------	☌° a. ⌐◪ ≡² p.
6	37.32	20.1	24.6	17	85	E	10.8	6	Ci.	S.-Cu. SSE, SE	2.5	☌ a. ⌐◪° ● p.
7	37.31	19.6	24.3	16.6	91.2	W quad.	10.2	6.3	Ci.	Cu.	------	☌ a. ≡ ┬ p.
8	37.24	19	25.5	16.7	89.2	SE quad.	10.6	8	Ci.	Cu. ESE	23.6	☌ a. ┬ ⌐◪ ● p.
9	36.87	19.8	24.4	17.2	85	E quad.	11.6	6	Ci.	Cu.	1.8	≡ ⌐◪ p.
10	37.50	20	25.2	16.9	82.8	E quad.	14.2	6.6	Ci.	S.-Cu. SW	------	≡ p.
11	38.04	19.4	25.7	16.5	83	E	16.1	4.7	A.-Cu., Ci.	Cu.	------	☌ a. ≡ ┬ p.
12	37.99	19.4	24.8	17	75.2	E	22.4	8.4	A.-Cu. ESE	S.-Cu. EbyS	------	
13	37.16	19.8	26.1	16.6	79.7	E, WSW	15.8	4.9	Ci.	Cu. E	------	≡² p.
14	37.03	19.8	25.8	17	86.2	SE quad.	11.6	6.1	Ci.	Cu.	1.5	☌ a. ≡² ┬ ⌐◪ ● p.
15	36.99	19.4	25	16.5	91.5	WSW, NE	11.6	7.4	Ci.	S.-Cu.	17.8	☌ a. ≡ ◠ ● ⌐◪ p.
16	36.97	19.1	24	17	90.9	W	10.9	6.4	Ci.	Cu. E	5.8	☌ a. ⌐◪ ≡ ● p. ┬
17	36.73	18.4	23.6	16.6	88.8	WSW, SE	12.4	8.3	Ci.-S.	Cu. E	2.8	≡² p ⌐◪ ◠ p.
18	36.48	19.3	25.3	15.6	80	SE quad.	13.5	7.4	Ci.-S. WSW	Cu.	------	≡² ┬° ⌐◪ d p.
19	36.53	19.6	25.9	16.5	80.3	E quad.	13	5.6	Ci.	Cu.	------	≡ ┬° p.
20	36.16	19.4	25.6	16.1	82.8	E	12.1	6.1	A.-Cu.	Cu.	------	☌ a. ┬ ≡ p.
21	35.98	18.6	22.5	16.5	80.8	E quad.	19.3	10	Ci.-S.	S.-Cu.	4.8	● a.
22	36.60	19.2	25.4	16.1	84.2	E quad.	12.5	6.4	A.-Cu.	Cu. SEbyE	------	⌐◪ ┬ ≡ p.
23	35.89	18.6	23.8	16.2	91.5	Variable	11.3	9.3	Ci.-S. ENE	Cu. EbyN	------	☌ a. ┬ d ≡² p.
24	35.35	19.7	24.7	15.4	84.5	W, E	14.1	8.6	Ci. ENE	Cu. NE	66	☌ a. ┬ ●² p.
25	35.28	18	23.4	15.9	89.5	W, NE	13.7	7.3	Ci.	Cu. E	18.1	● ┬ p. ≡ a. p.
26	35.04	17.6	23.1	15.5	92.2	W	10.2	7.4	Ci.	Cu. E	23.1	● ≡ d p.
27	34.57	17.4	20	15.9	90.8	SE quad.	15	10	A.-S.	S.-Cu.	------	
28	34.52	17.1	20.7	15.9	93.3	SE quad.	27.6	10	Ci.-S.	Fr.-N. SE	.8	d° a. p. p p.
29	34.75	17.9	23.2	15.9	90.2	ESE	25.4	9.3	Ci.-S.	Variable SE	15	◯° a. ⊕ ● ⌐◪ p.
30	34.97	17.9	22	16	87.2	SE quad.	23.3	9	Ci.-S.	S.-Cu. SSE, SE	.8	●° p.
Mean	636.31	19	24.3	16.4	85.9	----------	14.8	7.2	----------	----------	------	
Total	--------	------	------	------	-------	----------	---------	----------	----------	----------	230.3	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.90	27.5	32	23.9	79	SE quad.	1	6.8	A.-Cu., Ci.-S.	Cu.	2.1	d² ⌐◪° ● p.
2	57.66	27.8	32.4	24.4	78.3	E quad.	1	7.3	Ci.-S., A.-Cu.	Cu.	1	⌐◪ d ● ◟ p.
3	57.46	28.3	32.9	24.2	77.2	E quad.	1	1.8	Ci.-S.	Cu.	------	◟° p.
4	56.88	28.6	32.9	24.6	77.7	N quad.	1	2.3	Ci.-S.	S.-Cu.	------	⌐◪ p.
5	58.02	28.6	33	25.4	77	E quad.	1.2	1	Ci.-S.	Cu.	------	⌐◪ d ◟° p.
6	58.79	29	33.8	25	76.7	NE quad.	1	0	Ci.-S.	Cu.	------	⌐◪ ◟° p.
7	58.96	28.8	33.5	25.5	79.2	E quad.	1.2	2.5	Ci.-S.	Cu.	------	⌐◪ d° ◟° p.
8	58.84	28.3	33.7	24.5	77.3	SE quad.	1.2	1	Ci.-S.	Cu.	------	⌐◪ p.
9	58.34	28.4	32.9	24.5	76.8	Variable	1	1.2	Ci.-S., Ci.	Cu.	------	◟ p.
10	59.16	28.4	33	25.6	77.7	E quad.	1	2.8	Ci.-S.	Cu.	------	⌐◪ ◟° p.
11	59.59	28.3	33.1	24.5	77.6	E quad.	1	1.3	Ci.-S.	Cu.	------	⌐◪ p.
12	59.68	28.2	33.2	24.9	78.7	NE quad.	.8	3.7	Ci.-S., A.-Cu.	Cu.	.3	⌐◪ d ● p.
13	58.86	28.8	33.6	24.6	78.3	E, NNW	1.3	3.3	Ci.-S.	Cu.	6.8	◟ d ● p.
14	58.51	28.6	32.9	25.5	84.3	E quad.	1	3	Ci.-S.	Cu.	.8	d ⌐◪ ● p.
15	58.50	28.2	33.5	24.9	80.2	E	1.2	2.2	Ci.-S.	Cu.	------	⌐◪ d° ◟ p.
16	58.54	28.7	33.7	24.7	77.2	SE quad.	1	4	Ci.-S.	Cu.	------	⌐◪° ◟ p.
17	58.32	27.3	33.4	21.4	80.2	E quad.	1.2	3.8	Ci.-S.	Cu.	26.7	⌐◪ d ● ∪ ◟° p.
18	58.20	27.8	33	24.7	81.1	E quad.	1	3.7	Ci.-S.	Cu.	.8	⌐◪ d ● ◟° p.
19	58.01	27.5	32.6	24.5	80.8	SE quad.	1.2	2.7	A.-Cu., Ci.-S.	Cu.	------	⌐◪ d° ⊍ ◟ p.
20	57.57	28	33.8	24.5	78.5	SE quad.	1	2.2	Ci., Ci.-S.	Cu.	4.6	⌐◪ d° ● p.
21	57.61	26.9	32.4	23.5	85	E quad.	1	7.7	Ci.-S.	S.-Cu.	41.1	⌐◪ d ● ∪ p.
22	58.40	27.6	32.6	23.9	85.2	E quad.	1	3.7	Ci.-S.	Cu.	.3	d ⌐◪ p.
23	57.47	27.8	32.8	24.8	86.3	E quad.	1.2	3.7	Ci.-S.	Cu.	15	d ⌐◪ ● ⊍ p.
24	56.52	28	32.4	24.5	80.4	SE quad.	1	4	Ci.-S.	Cu. SW	------	d° ⌐◪ ∩ ⊍ p.
25	56.92	27.4	32.9	23.5	82.5	E quad.	.8	3.7	Ci.-S.	Cu.	24.7	⌐◪ d ● p.
26	56.69	26.7	32.2	23.9	86.1	SE quad.	1	6.7	Ci.-S.	Cu.-N., Cu.	7.2	⊍ a. ⌐◪ d° ● p.
27	56.02	25.2	27.1	23.3	90.4	SE quad.	1	10	Ci.-S.	Cu.-N.	8.9	● a. p.
28	55.84	26.7	32.4	23.9	85.2	SE quad.	1	10	Ci.-S,	S.-Cu.	35.8	d ● ⌐◪ p.
29	55.74	26.9	31.3	23	88.8	S quad.	1.5	9.8	Ci.-S.	Cu.-N., N.	55.4	∪ a. ● ⌐◪ p.
30	56.40	27.4	30.9	23.9	83.2	S quad.	1.3	6.3	Ci.-S.	Cu.-N., Cu.	6.4	⊍ a. ⌐◪ p. d a. p.
Mean	757.85	27.9	32.7	24.3	80.9	----------	1.1	4.1	----------	----------	------	
Total	--------	------	------	------	-------	----------	-------	----------	----------	----------	237.9	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	757.97	27.4	34.9	23.1	82	SE, NE	0.7	7.2	Variable	Cu.-N.	------	☊² a. ◟ d p.
2	57.72	27.6	36.6	23	77.2	SE	.7	7.3	Ci.-S., Ci.-Cu.	Cu.-N. SE	------	☊² a. ◟ ⌐◪ p.
3	57.53	29.1	36.1	23.6	76.4	SE, NW	.8	5.3	Ci., Ci.-Cu.	Cu. S	------	☊ a.
4	57.12	29.3	36	24	75.6	SE	.3	5.5	Ci. NW	Cu., Cu.-N. S, SSW	------	☊² a.
5	58.06	29.6	35.5	22.6	73.5	SE	1.2	2.8	Ci. N	Fr.-Cu., Cu.-N. SE, SW	------	☊ a.
6	58.93	30.1	37	24	75	S	.5	7	Ci.	Cu., Cu.-N. SSW, NW	------	☊ a.
7	58.70	29.9	37.5	23.4	75.7	NW	.8	1.3	----------	Cu.	------	☊² a.
8	58.59	29.2	36.8	25.4	76.8	Variable	.5	7	Ci.	Cu. SSW	------	☊ a. ⌐◪ d ◟ p.
9	58.43	29	36.4	24.5	78.2	S	1.2	6	----------	Cu.	------	☊ a. ◟ ⌐◪ p.
10	59	30.4	37.2	24.5	68.2	SW	.7	3.3	Ci., Ci.-S.	Cu.	------	☊ a. ◟ p.
11	60.07	29.9	37.3	24.2	70.9	Variable	.7	2	Ci.	Cu.-N. SE	------	☊² a.
12	60.41	29.2	35.9	22.7	73.2	SE	.5	5.3	Ci.-S. SE	Cu. S	------	☊ a. ⌐◪ p.
13	59.35	29.1	36.6	22.6	74.2	SE	.5	4	Ci., A.-Cu.	Cu. E	------	☊² a. ⌐◪ p.
14	58.58	29.1	37.4	24	74.7	ESE, S	.5	2.5	Ci.-S.	Cu. E	------	☊° a. ⌐◪ d ◟ p.
15	58.47	30.1	37.6	23.4	70	SE	.5	2.7	----------	Cu.	------	☊ a. ◟ p.
16	58.53	30.2	37.9	24.3	69.3	SE, NE	.8	2.8	A.-Cu. N	Cu.-N. E, NW	------	☊ a. ⊤ ⌐◪ p.
17	58.63	28.8	36.6	23.2	73.3	SE	.7	5	Ci. NW	Cu., Cu.-N. SE, N	------	☊² ◯² a. d ⌐◪² ◟ p.
18	58.74	28.5	36	22.2	76.5	SE	.5	6.3	Ci., Ci.-S.	Cu. E	------	☊² a. ∪² p.
19	58.89	27.8	35.8	22.8	82.2	SW, S	.3	5.2	Ci.	Cu.-N. S	6.6	☊ a. ⌐◪ ● p.
20	58.31	27.9	36.6	22.8	80.3	SE, SW	.3	3.7	Ci.-S.	Cu. SE	4.6	☊² ≡ a. d ● ⌐◪ p.
21	58.22	27.9	34.5	23.1	81.4	SW, SE	.3	6.5	Ci.-S.	Cu. E	------	☊ a. ⌐◪ p.
22	58.78	27.5	36.6	22.6	82.9	SE	.3	3.7	Ci.-S.	Cu. SE, ESE	------	☊ a. d ◟ p.
23	57.66	28.6	36.5	23.5	75.5	SE	.2	4.8	Ci.	Cu. E	------	☊ a. ⊤ p.
24	57.17	28.2	36.4	23.5	78.3	NE	.3	5.3	Ci., Ci.-S.	Cu.-N. NE	------	☊ a.
25	57.18	27.5	35.4	23	80.2	NE	.7	4.8	Ci., Ci.-S.	Cu. E	2.3	☊ a. ● ⌐◪ ∪ ◟ p.
26	56.85	27.7	34.4	23	80	N	.2	6.8	Ci.-S.	Cu.-N. N, NE	3.8	☊ a. ∩ ⌐◪ ◟ ● p.
27	56.20	25.5	27.4	23.9	89.5	SE, SW	1.3	9.3	Ci.-S.	Cu.-N. S	21.6	d ● a.
28	56.77	27.8	32.6	23.5	80	SE	1	7.3	Ci.-S.	Fr.-N. SE	------	☊ ◯ a. d p.
29	56.55	28.8	35.2	23.3	73	SE	2	5.7	Ci.-S. ESE	Cu., S.	------	☊ a.
30	56.30	29.2	36.6	23	72.3	SE	1.7	5.7	Ci.-S.	S.-Cu.	------	☊ a.
Mean	758.12	28.7	35.9	23.4	76.5	----------	.7	5.1	----------	----------	------	
Total	--------	------	------	------	-------	----------	-------	----------	----------	----------	38.9	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, −1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Perct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.24	26	32.1	22	85	S	9.4	8.2	A.-Cu. S, W	N. W	36	●° a. ⌐⊻ ●² ⊻ p.
2	58.05	26.8	32.2	23	83	S quad.	9.4	5.7	A.-Cu. SW	S.-Cu. WSW	------	● a. ⊤ ⊻ p.
3	57.76	27.4	33	24.1	79.8	S quad.	12	4.8	A.-Cu. SW	S.-Cu. SW	------	⊤° ⊻ p.
4	57.18	28.2	33	24.6	80.5	S, NE	12.3	4.3	Ci. N	Cu.-N. S	------	∞ a. p. ⟨° p.
5	58.12	28.6	34.4	24	74.2	S quad.	13.1	.8	------	Cu.-N. WSW	------	Ω a. ⌐⊻ p.
6	59.10	28.9	34.4	25.1	79	SW quad.	9.7	.2	------	Cu.-N.	------	∞ a.
7	59.02	28.8	33.8	25.1	76.7	SW, N	11.8	.3	------	Cu.-N. N	------	∞ a.
8	59.04	28.3	34.4	25	80.5	Variable	10.4	2.2	Ci.-S. N	Cu. S	------	∞ a. p. ⊤° ⊻ p.
9	58.64	28.6	34.1	24.8	78.8	Variable	12.9	.5	------	Cu. S	------	∞ a. p. ⊤° ⊻ p.
10	59.42	28.6	34.1	25.2	80.3	Variable	13.3	.2	------	Cu.-N.	------	∞ a. p. ⊻ p.
11	60.27	28.3	33.3	24.6	77.2	S quad.	12.7	.2	------	S.-Cu.	------	⊤° p.
12	60.47	28.2	33	24.3	77	SE quad.	11.4	1.8	A.-Cu. S	Cu.-N. S	------	⊻ p.
13	59.42	28.4	33.8	24.1	74.5	E quad.	10.8	.2	------	Cu.-N.	------	⊻ p.
14	58.67	29	33.6	24.9	73	E quad.	13.9	.3	------	Cu.-N.	------	
15	58.73	29.4	34.6	25.1	74.2	S	11.7	0	------	------	------	⊻ p.
16	58.64	29.3	34.7	24.8	73.8	S quad.	12.8	.2	------	Cu.-N.	------	⊻ p.
17	58.80	28.6	33.6	24.6	73.2	S quad.	11.7	1.8	Ci.-S., A.-Cu.	Cu.-N.	------	⊻ p.
18	58.94	28.4	32.1	25.6	74.2	E, S	12.2	4	Ci.-S. W	Cu.-N. SE	1	● a. ⊻ p.
19	58.84	28.6	33.9	24	73.3	SE quad.	12.9	.2	------	Cu.-N.	------	Ω a.
20	58.54	27.8	33.7	23	75.5	E quad.	10.8	1.3	Ci.-S. SE	Cu.-N.	------	
21	58.30	27.8	33.5	23.5	78.5	S quad.	9.2	2.2	Ci. W	Cu.-N. S	4.1	● ⊤° p.
22	58.86	28.6	33.1	24.6	74.5	NE, S	12.1	3.2	Ci.-S. SE	S.-Cu., Cu.-N.	------	
23	58.07	28.2	33.2	24.8	77.7	NE quad.	9	3	Ci.-S. E	S.-Cu., Cu.-N.	------	
24	57.35	28.2	33.4	23.6	78.8	S, NE	11.4	4.3	Ci. E	Cu.-N. SE	------	
25	57.40	28.3	33.1	24.6	73.8	E quad.	9	.7	------	Cu.-N. SE	------	Ω a. ⊻ p.
26	57.01	27.6	31.4	24.4	78.2	E quad.	8.9	6	Ci.-S. SE	S.-Cu.	8.4	● p.
27	55.99	25.6	28.4	23.7	91.3	S quad.	15.2	9	Ci.-S. E	S.-Cu. S, SE	69	●² a. ⊤ p.
28	56.74	26.2	31.7	23.8	85.3	SE	12.4	9.3	Ci.-S. SE	S.-Cu. S	8	⊤° ●° p.
29	56.49	28.6	33.3	24	70.6	SE, S	14.5	4.5	Ci.-S.	Cu.-N. S, SE	------	⊻ p.
30	56.60	28.1	34.2	23.9	73.6	SE quad.	10.8	2.7	Ci.-S.	Cu.-N. S	------	⌐⊻ p.
Mean	758.29	28.1	33.2	24.3	77.5	------	11.6	2.7	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	119.3	

METEOROLOGICAL DATA, FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	20.7	93	71	6	10	6.6	☊ a. ●² ☾² p.
2	32.5	22	96	78	4	10	------	☊ ≡° a. ●° p.
3	32.6	22.5	86	75	5	7	.5	☊ a. ◩ p.
4	31.4	22.5	92	84	5	10	8.4	◩ ●° a. ☾ ● p.
5	29.1	21.8	93	75	10	10	35.3	●° a. ◩² ●² p.
6	32	22.1	89	82	8	10	26.4	●² a. p.
7	31.1	22.2	97	81	10	10	7.9	● p.
8	32.4	22	97	81	8	10	22.4	d a. ● p.
9	28.4	22.3	95	89	8	10	13.7	● a. p.
10	31.2	21.8	93	90	10	8	30.5	☊ a. ●² ☾² p.
11	29.5	21.5	97	90	8	10	47.5	●² p.
12	30.7	21.6	97	95	8	10	3.8	☊ ≡ a. ◓ a. p.
13	32.2	22.8	97	82	10	10	------	☊ ≡ a.
14	32	22.3	97	68	10	10	27.9	☊ ≡ a. d ●² p.
15	33	21.2	97	74	8	8	------	☊ ≡ a.
16	31.8	21.6	96	78	10	10	23.9	☊ ≡ a. ● a. p.
17	31	21.5	95	75	8	10	2	☊ ≡° ●° a. ◡° ☾² p
18	32.1	21.1	96	72	6	10	15.2	☊ ≡° d a. ●° ◡² p
19	31.3	22.4	93	80	10	10	------	☊ a. d ◡² p.
20	32.1	21.9	93	75	6	10	------	☊ a.
21	30.1	21.8	97	80	8	10	17.1	☊° ●° a.
22	30	21.6	95	79	8	6	2.5	● a. d a. p.
23	30.3	21.6	94	71	8	6	31	●² a. p. ◡° p.
24	29.8	21.6	96	65	8	10	52.5	☊ a. ●² a.p. ☾² p.
25	29.7	21.7	92	75	10	10	33.3	●² a. ●° p.
26	30.7	21.3	95	79	10	10	27.4	●² a.
27	31.3	21.8	94	68	8	10	24.9	●² a. ●° p.
28	30.1	21.7	93	74	10	10	------	
29	30.8	21.4	90	71	10	10	------	●° a. p.
30	33.4	21.5	95	64	8	10	------	☊² a. ☾² p.
Mean	31.5	21.8	94.3	77.4	8.2	9.5	------	
Total	------	------	------	------	------	------	460.7	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	22	97	71	4	10	42.9	☊° a. ◓ a. p.
2	32.8	22	96	88	10	10	5.3	◓ d ⊤ a. ●° p.
3	31.3	22.6	98	89	10	9	11.2	d ⊤ a. ● a. p.
4	32.3	22.7	96	80	4	9	38.1	☊ a. ● ◩ p.
5	32.3	22.5	95	75	10	9	19.1	● ⊤ a.
6	29.6	22.5	96	96	10	10	21.3	d a. ● a. p.
7	29.3	22.1	97	83	4	10	5.3	☊ d a. ● p.
8	30.3	22.6	96	81	10	9	------	d a.
9	30.3	22.7	96	83	10	9	3.8	☊ ●° a.
10	31.3	22.8	96	81	9	10	35.6	☊ a ● a. p.
11	28.8	22.3	94	88	10	10	10.6	●² a. ●° p.
12	30.3	22.3	95	81	9	9	------	☊ a.
13	30.5	22.5	96	80	3	6	------	☊ a.
14	30.3	22.2	96	69	9	10	4.3	◠ a. ● ⊤ p.
15	33.3	22	96	85	9	9	------	⊤ a. p.
16	32.3	22	96	87	9	9	8.1	☊ ●° a.
17	31.8	22.5	96	80	10	10	38.6	☊ a. ● a. p. d p.
18	31.3	22	97	92	10	10	39.6	●² d a. ● p.
19	28	22.5	96	90	10	10	.5	● d a.
20	29.5	21.9	96	92	3	10	2.5	☊ ● a. d p.
21	31.3	22	95	88	10	9	------	☊ a.
22	31.3	22.6	96	83	9	10	4.1	☊ a. ● p.
23	29.8	22.7	96	96	10	10	15.8	● d p.
24	30.8	22.5	96	91	10	10	16	d a. ● a. p.
25	30.3	22.5	96	92	10	10	4.3	● a. p° p.
26	29.3	22.5	96	88	10	10	------	● a.
27	30.5	22	96	80	10	10	1.8	☊ p a.
28	28.8	22	96	85	10	9	1	●° a.
29	29.8	21.7	96	87	10	10	4.8	● a.
30	30.8	21.5	97	85	6	7	------	☊ a.
Mean	30.7	22.3	96	84.9	8.6	9.4	------	
Total	------	------	------	------	------	------	331.6	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	23.4	83	59	7	5	5.6	
2	30.6	23.6	98	73	10	9	------	◩ ● a.
3	31	23.4	82	78	8	8	3.6	◩ a. ● p.
4	32.5	23.9	94	61	5	5	12.4	◩ p.
5	30.9	23	96	76	10	10	9.1	● a. ◩ p.
6	28.5	21.5	86	83	10	10	.5	◩ a. d p.
7	29	23.4	92	82	8	9	.5	◩ a. d a. p.
8	29.5	23	88	74	10	7	------	d° a.
9	29.1	23.5	89	82	10	9	11.1	d ● a.
10	28.2	23.5	89	81	5	9	34.3	● a. p.
11	27.2	22.5	94	83	10	10	20.3	● a. p. ◩ p.
12	30.5	23	91	72	9	4	------	
13	32.5	22.9	90	59	8	4	------	☾ p.
14	30	23.4	92	78	8	9	------	◯ p.
15	30.7	23.4	91	77	9	9	.8	●° a. ◩ p.
16	30.4	23	89	72	10	8	1.8	●° a.
17	29.6	24	96	77	10	10	9.1	●° a. ◩ p.
18	29.9	23.4	92	80	8	9	9.4	● ⊤° a. d p.
19	27.9	23	96	81	10	10	------	● a.
20	29.4	23	90	79	3	9	------	d° p.
21	29.5	22.9	84	70	10	8	------	d° p.
22	29.2	23	90	78	9	8	2.5	
23	29.5	23	95	81	10	9	------	◡ a.
24	31	23	88	68	10	5	2.5	d ◠ a.
25	29	23.4	92	76	10	10	18.6	● a.
26	28	23.5	91	81	10	9	------	●° a.
27	28	23.2	86	76	10	10	6.6	● p.
28	28	22.5	92	82	10	10	------	d a. p.
29	28.1	22.4	91	79	10	10	------	d a.
30	29.5	23	91	75	7	8	------	
Mean	29.6	23.1	90.6	75.8	8.8	8.3	------	
Total	------	------	------	------	------	------	148.7	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	21.6	96	70	6	6	------	
2	31.7	22	96	70	6	7	------	
3	32.1	22.8	96	69	7	6	------	
4	32.2	22.6	96	69	5	8	15	● p.
5	32.9	22.7	98	69	5	6	3.3	● p.
6	31.5	23.1	97	74	8	6	------	
7	31.9	22.3	97	72	5	5	16.3	● p.
8	31.8	21.5	95	73	8	7	------	
9	31.1	23	97	77	7	8	18.8	d ● p.
10	28.1	22.7	97	86	8	8	------	
11	32.1	22.3	99	72	7	6	------	◠ a.
12	31.1	22.1	96	72	5	6	------	
13	32.1	22.2	97	70	5	6	------	
14	32.7	23	96	72	5	6	------	
15	32.2	21.9	96	68	5	7	------	
16	31.5	22.1	97	71	6	7	------	
17	30.5	21.9	97	79	8	8	------	
18	28.8	23	98	88	9	8	39.9	● a. p. d p.
19	30.5	22.5	97	72	6	7	44.7	●² ◩ p.
20	31.8	21.9	96	77	6	7	50.8	●² p.
21	31.1	21.8	99	76	7	7	------	
22	30.2	21.9	99	77	6	7	------	
23	31.4	22.5	97	74	7	6	25.7	●² p.
24	31.1	21.7	98	75	5	7	61	●² p.
25	31.2	21.5	97	72	6	6	16.3	● p.
26	31.3	22.2	98	76	6	5	------	
27	30.8	21.1	97	71	9	6	24.9	● p.
28	30.2	22.8	97	81	5	7	17	● a. p.
29	26.7	22.5	98	92	10	10	52.6	● a. p.
30	31.1	21.1	99	71	7	7	15.7	● p.
Mean	31.1	22.2	97.1	74.5	6.5	6.8	------	
Total	------	------	------	------	------	------	402	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[$\phi = 7°\ 13'$ N; $\lambda = 124°\ 15'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.5	23.5	93	67	6	2	------	d° ◟ p.
2	33.1	22.6	87	65	2	3	------	☊ a. ⌐◪ d p.
3	33.6	22.5	84	58	2	3	45.7	●ᵍ ⌐◪ p.
4	32.6	21.2	97	61	4	4	12.7	◜° ● p.
5	------	21.6	92	61	3	2	------	☊ a. ⌐◟° p.
6	32.1	22.6	88	66	6	4	2.5	● ◟ p.
7	31.8	23.5	93	71	6	2	15.2	● ◟ p.
8	31.6	22	87	70	6	4	1.3	☊ a. ┬ ● ◟ p.
9	32.5	22.1	92	71	3	2	1.5	┬ ● ◟ p.
10	32.6	23.1	92	85	4	6	2.5	☊ ●° a. d ◟ p.
11	------	22	91	67	3	4	5.6	☊ a. ● p.
12	32.2	23.2	93	71	5	6	7.6	● ◟ p.
13	32.1	21.2	93	63	2	3	------	☊ a. ⊽ p.
14	32.8	22.1	92	63	2	8	29	☊ a. ●ᵍ p.
15	32.6	21.6	93	63	2	6	7.6	☊ a. ● p.
16	32	20	91	71	2	10	5	● a. p. ◟ p.
17	30.6	21.7	91	72	5	10	19	☊ a. ● ◟ p.
18	30.4	20.7	93	73	6	10	30.5	☌ a. ●ᵍ p.
19	30.1	20.1	88	71	10	10	------	☊ a. ◟ ●° p.
20	31.6	20.4	90	65	3	3	1.5	☊ a. d ●° p.
21	------	21	91	69	4	8	10.2	☊ a. ● p.
22	------	20.6	91	68	10	8	3.8	d ●° a. ● p.
23	31.6	22.4	96	74	8	4	6.9	☊ ≡° a. ● ◟ p.
24	------	21.6	95	63	8	4	------	≡° a. ◟ p.
25	30	22.1	90	79	8	6	16.5	● a. p. d p.
26	28.2	22.4	91	91	10	10	5.8	● a. p.
27	30.6	21	94	69	8	6	12.7	≡° d a. ● p.
28	30	21	93	69	8	3	14	● p.
29	28.1	21.2	91	78	10	10	15.2	d a. ● a. p.
30	30.8	21	96	71	3	3	50.8	☊ᵛ ≡ a. ●ᵍ p.
Mean	31.5	21.7	91.6	69.5	5.3	5.5	------	
Total	------	------	------	------	------	------	323.1	

CAGAYAN, MISAMIS.

[$\phi = 8°\ 29'$ N; $\lambda = 124°\ 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.2	22.8	90	62	6	7	------	d° a. ⌐◪° p.
2	33	21	88	53	3	7	------	☊ a.
3	33.1	23.4	91	68	6	9	------	☊° a. ┬ ◟° p.
4	33.6	22.5	93	62	4	6	------	☊ a.
5	------	------	------	------	------	------	------	------
6	------	22.8	------	64	------	6	------	◟° p.
7	34.7	21.3	88	63	7	6	------	☊° a. ◟° p.
8	34	22.6	91	65	10	9	------	☊° a.
9	33.2	23	90	68	5	9	------	☊° a.
10	29.6	22.9	90	86	8	10	6.9	● ⌐◪ a. ◟° p.
11	33	21.9	90	73	2	10	4.6	☊ a. d p.
12	33.8	20.9	92	58	2	3	------	
13	34.5	20.7	89	57	4	2	------	
14	34.4	21.8	89	53	0	5	9.1	☊° a. ⌐◪° ●° p.
15	34.2	21.9	94	63	5	4	12.7	◜° ● p.
16	32.9	21.9	89	73	4	9	.3	┬ d p.
17	32.6	22	91	65	4	9	3.8	◪ d p.
18	33.1	22.9	95	67	9	9	46.5	◪ ● p.
19	31.2	23	97	86	9	9	22.8	◪° ● p.
20	32.2	22.3	96	73	9	10	8.9	◪° ● d p.
21	31.1	23	93	70	9	8	9.4	● ◟° p.
22	32.1	22.1	93	68	8	8	------	
23	32.8	22.7	94	67	8	9	9.4	dᵍ ◟ p.
24	33.3	22.7	96	63	9	7	28.2	● a. d ◟° p.
25	22.6	22.2	94	76	9	10	23.9	● d p.
26	32	21	93	69	7	9	16.5	● p.
27	32.4	21.6	96	69	8	9	------	
28	32.8	22.6	92	61	6	8	8.1	☊° a. ● ◟° p.
29	32.7	22.1	92	62	9	10	1.5	d p.
30	31.6	21.7	95	66	5	6	13.4	● p.
Mean	32.8	22.2	92.2	66.6	6.2	7.7	------	
Total	------	------	------	------	------	------	226	

DAPITAN.

[$\phi = 8°\ 40'$ N; $\lambda = 123°\ 25'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	23.7	83	75	8	10	3.6	● p.
2	31.4	23.3	91	71	7	9	------	◟ p.
3	29.2	24	90	75	9	7	------	◟ p.
4	31.2	23.4	87	68	8	6	------	☊ a. ◟ p.
5	32.5	22.8	88	77	7	8	------	☊ a. ◟ p.
6	31.3	21.8	90	68	10	6	2.5	● ┬ a. ◟ p.
7	32.1	22.3	87	64	9	9	------	◟ p.
8	32.5	22.4	90	69	9	7	4.62	
9	31.7	22.8	88	67	10	7	------	● ⌒ a.
10	30.8	23.1	88	67	7	6	------	◟ p.
11	30.5	22.4	88	69	6	10	28.4	● p.
12	32.7	23.2	88	67	8	5	------	◟ p.
13	31.6	23.4	87	73	7	6	------	☊ a. ◟ p.
14	31.9	22.1	92	69	7	6	------	☊ a. ◟ p.
15	32.6	23.5	92	69	9	4	------	☊ a. ◟ p.
16	31.7	24.8	88	65	7	5	2.3	● a. ┬ ◟ p.
17	31	------	93	68	9	4	3.8	● ⌒ a.
18	30.8	22.8	91	67	10	7	31.5	● a. ◟ p.
19	------	21.6	95	67	10	5	------	● a. ◟ ┬ p.
20	32.5	22.4	94	66	8	7	45.2	◟ p.
21	32.2	22	94	67	9	5	36.1	● a.
22	31.8	24.2	95	66	10	4	4.6	● a. ◟ p.
23	32.4	24.3	92	67	9	8	------	● a. ◟ ┬ p.
24	32.2	24.7	92	65	9	6	------	┬ p.
25	29.3	23.5	91	87	8	10	2.5	● p.
26	29.6	23.4	91	73	10	6	------	◟ p.
27	------	23.2	92	60	8	7	------	◟ p.
28	33.3	23.8	92	66	9	5	------	d ◟ p.
29	32.2	23.8	90	63	9	4	------	◟ p.
30	33.8	23.8	90	69	8	8	.5	●° a. ◟ p.
Mean	31.6	23.2	90.3	68.8	8.5	6.6	------	
Total	------	------	------	------	------	------	165.6	

BUTUAN.

[$\phi = 8°\ 56'$ N; $\lambda = 125°\ 32'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	23.4	92	82	4	7	------	☊ a. ┬ d° ⌒ p.
2	31	23.5	94	75	8	10	1.3	☊ a. ● ┬ p.
3	33.5	23.6	95	88	5	8	31.8	☊ a. ◪ ●ᵍ p.
4	29.8	24.1	96	82	7	10	------	☊ a. d a. p.
5	32.5	24.2	91	73	6	7	5.1	☊ a. ● p.
6	32	23.4	90	89	9	10	1.8	●° a. p. ◟ p.
7	31	23.5	96	92	6	10	11.2	☊ᵛ a. ● ⌐◪ p.
8	29.1	23.5	98	70	10	8	7.4	☊ a. ◪ ● p.
9	31.3	23.9	96	71	9	9	4.6	☊ d a. ● p.
10	26.3	22.9	95	90	10	10	1.3	●° a. d a. p.
11	32.3	23.5	94	85	5	8	18.8	☊ a. ● ⌐◪ p.
12	33	23.5	95	68	7	7	------	☊ a.
13	33	23.7	94	82	6	8	10.6	d° a. ◪ ● p.
14	30.8	24	95	81	8	9	8.6	☊ a. ⌐◪ ● p.
15	31.1	23.7	96	92	7	10	11.9	☊ d° a. ┬ ● a. p.
16	31.1	23.6	95	92	7	9	17	┬ ● a. ┬ d ⌣ p.
17	30.5	23.7	97	74	7	8	------	☊ a. d° ⊥ p.
18	31.5	24.1	96	81	7	7	22.6	d a. ● ┬ ⌣ ⊽ p.
19	29.7	23.6	96	89	8	10	2.8	☊ a. ●° ┬ p.
20	29.5	23.2	93	70	10	8	------	☊ a. d p.
21	32.3	23.3	94	66	10	9	.3	☊ a. ⌐◪ ● p.
22	30.1	23.5	96	79	9	8	2.3	☊ ●° a. d a. p.
23	32.1	23.3	96	72	7	9	6.4	☊ a. ● ⌒ p.
24	31.7	23.2	96	75	9	8	1.8	☊ d° a. ●° p.
25	31.2	22.9	95	62	9	8	11.7	●° a. ⌐◪ ● p.
26	31.7	22.8	93	63	9	7	6.9	●⌒ ┬ ◟ p.
27	31.8	22.6	96	73	7	8	2	☊ a. ● p.
28	30	22.5	99	68	9	7	4.3	☊ ≡ a. ◯ ┬ ● p.
29	26.5	22.9	96	86	9	10	.8	☊ ≡ d a. ●° p.
30	29.5	23	96	68	9	8	1.8	●° d° a. ◟ p.
Mean	31	23.4	95	77.9	7.8	8.5	------	
Total	------	------	------	------	------	------	195.1	

METEOROLOGICAL DATA, ETC.—Continued.

DUMAGUETE.

[$\phi = 9°\ 18'$ N; $\lambda = 123°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	23.8	93	73	10	10	0.5	☇◪ ●° a. ○ d² p.
2	------	25.3	93	74	10	10	------	∞° ●° a. ○° a. p.
3	------	24.6	84	77	10	10	2.5	∞° a. ⊕ ☇◪ ● p.
4	------	24.6	95	72	10	10	------	┬ ○² a. ○ ☇◪ p.
5	------	26.5	82	71	10	8	------	
6	------	26.3	78	74	10	10	3.6	● ☇◪ p.
7	------	24.9	90	75	10	3	7.6	↘ p.
8	------	24.5	97	79	10	10	------	☇◪ ● a. ○° a. p.
9	------	24	89	77	10	10	8.8	↙ ● ∞ a.
10	------	25	82	80	10	10	------	☇◪ a. d p.
11	------	24.9	80	78	10	8	3	⊕² ↘ ● p.
12	------	24.7	88	75	10	8	------	⊕ ↘ p.
13	------	24.4	81	77	10	4	------	↘ p.
14	------	24.9	80	71	5	7	------	☇◪ p.
15	------	24	80	74	10	5	------	◠° a. p. ☋² p.
16	------	23.4	84	75	10	10	------	○² ☋² p.
17	------	23	84	84	10	10	1.3	● ○° ☋² p.
18	------	23.1	85	72	10	10	7.9	∞ a. ☇◪ ● p.
19	------	21.8	99	78	10	10	.5	≡ ● a. ○ p.
20	------	22.2	88	73	10	10	32.6	☊° a. ●² ☇◪ p.
21	------	21.2	97	79	7	10	13.5	∞ a. ● p.
22	------	22	97	79	10	10	14.1	○ a. ↘ p.
23	------	21.8	97	80	10	10	9.4	● ≡ a. ↘ p.
24	------	21	98	81	10	10	.3	● a. ○ p.
25	------	21.7	97	72	10	10	------	d ┬ a. ↘ a. p.
26	------	21.4	86	81	10	10	------	☊ ☋ a. ↘ p.
27	------	21.6	90	70	10	8	2.9	☊ a. ┬ d ↘ p.
28	------	21.4	95	71	10	8	.3	● ≡ a. ↘ p.
29	------	20.8	92	77	10	10	------	∞ a.
30	------	21	87	66	10	10	1.8	∞ ○² a. ☇◪ d² p.
Mean	------	23.3	88.9	75.5	9.7	9	------	
Total	------	------	------	------	------	------	110.6	

YAP, (Western Carolines).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	24.7	90	79	5	5	1.3	d° a. ●° p.
2	31.5	25.4	92	77	9	8	10.7	● a. p. ↘ p.
3	30.7	25.3	94	77	7	5	3.6	● a. p. d° ↘ p.
4	31	25.4	92	74	8	4	.3	d° a. ↘° p.
5	30.7	26	90	71	8	1	.3	○° a. ↘° d° p.
6	31	25.1	90	86	2	9	18.3	d° ○° a. ◠° ● ↘° p.
7	30.5	24.9	93	72	5	5	5.3	↘° p.
8	30.1	24.1	97	83	9	10	11.7	☇◪° ● a. ○° ● p.
9	30.7	24.8	87	84	8	9	------	↘° ○° a. ↙° p.
10	30.3	24.3	92	76	2	5	.5	○° a. ◠ d p.
11	31	24.6	91	87	1	6	5.1	○° a. ● p.
12	30.5	25.3	88	71	4	4	------	⊕° ∞² d° p.
13	31	25.5	88	78	2	3	1.1	↘° d° a. ⊕° ●° ☋° p.
14	30.3	25.6	89	78	6	8	.5	◠° ○° a. ● °↙² ☋° ☋° p
15	30.1	24.9	86	78	8	9	9.6	● ○° a. ↙ ☋² ↘ p.
16	29.2	24.7	87	81	9	8	9.9	● a. d a. p. ↙ ☋
17	31	24.8	93	79	9	8	8.2	d a. p. ● ☋ p.
18	29	24.4	93	92	10	8	12	● a. d a. p. ↙² ☋²
19	29.5	23.8	92	78	8	8	8.6	d° a. p. ● p.
20	29.6	23.6	94	83	7	6	10	d a. ○ ⊕ ● ↙° ☋²
21	30.8	24.6	84	74	9	3	5.1	⊕ d° a. ⊕ ● ☋ ↘
22	30.8	25.3	89	70	4	8	8.6	↙° d a. d° ● p.
23	29.5	24.9	90	78	10	9	25.4	● a. d a. p.
24	29.6	24.1	98	77	9	4	24.7	● d a. p.
25	31.5	24.5	95	77	7	8	10.4	d² a. ● d ↙° ☋ p.
26	30.5	24.2	96	78	4	5	------	☊ ○° a. d° ↘ p.
27	30	25.7	88	81	4	7	3.3	☋ ↙° a. ● ↘ p.
28	28.9	24.6	96	82	9	9	10.4	● a. ↙° ●° p.
29	30.8	24.5	98	80	9	8	30	○° ● °a ◠° ●° ↙° p
30	29.1	23.5	97	82	7	9	.5	d a. ↙° p.
Mean	30.3	24.8	91.6	78.8	6.6	6.6	------	
Total	------	------	------	------	------	------	235.4	

SURIGAO.

[$\phi = 9°\ 48'$ N; $\lambda = 125°\ 29'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	23.6	96	72	5	5	------	☊° a. d° p.
2	32.6	22.6	96	66	9	9	------	
3	32.1	22.5	93	77	7	10	7.6	☊² a. ●² p.
4	32.1	22.3	96	80	10	10	1.3	☊² a. d° a. p.
5	32.4	23.3	96	74	10	7	------	☊ d° a.
6	31.3	22.1	93	86	10	10	8	☊° a. ● d° p.
7	31.4	23.4	96	69	10	5	14.5	● ☇◪ a. ◠ p.
8	32.1	23.4	95	88	10	10	2.7	☊² a. d a. p.
9	32.4	23.2	96	69	4	8	.5	☊² a.
10	31.4	23.2	95	80	8	10	5.1	┬ a. ◠° p.
11	31.5	23.2	96	78	6	9	20.8	☊ a. ○ ●² p.
12	31.4	23.2	92	76	8	4	15	◠ a. d° a. p. p p.
13	31.9	23	95	75	5	3	------	☊ a.
14	31.9	23	93	78	4	9	5.1	☊ ● a. d p.
15	31.8	23.1	97	87	8	10	16.3	┬ p a. ● ☇◪ p.
16	31.8	23.9	97	78	7	5	5.8	☊° d a. p p.
17	30	23	97	81	10	10	5.9	● a. d a. p. ☋ p.
18	32	22.9	96	70	4	4	20.6	☊ a.
19	31.8	24.1	97	78	10	10	41.9	●° a. ●² ┬ p.
20	31.6	22.9	95	78	10	10	1.3	● a. d p.
21	31.9	23.4	96	74	10	8	3.3	d a.
22	31.8	23.3	97	78	10	7	2.5	☊ a.
23	31.5	24	96	81	10	10	.8	
24	31.6	24	96	81	10	7	.3	p a. ┬ p.
25	31.5	23.7	96	73	10	9	1.3	☊ a. p° p.
26	31.5	23	97	69	10	8	13.5	☊° a. ● p.
27	32.1	23.1	95	73	10	3	.3	d a. ┬ p.
28	31.5	22.7	95	72	10	7	2.3	☊ a. d² p.
29	31.9	23.7	96	88	10	10	4.1	d² a. ⊕ ◠ ● p.
30	31.8	22.7	97	78	9	9	23.7	☊² d a. ● p.
Mean	31.8	23.2	95.6	76.9	8.5	7.9	------	
Total	------	------	------	------	------	------	224.5	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	24.4	95	75	8	7	------	
2	32.5	23.5	92	60	10	10	------	∞² ↘ p.
3	32	23.6	88	62	10	7	8.1	● ↘ p.
4	32.6	24	94	78	10	10	------	d ↘ p.
5	31	24.2	85	68	10	8	------	
6	33	23.8	90	71	10	10	4.6	d² a. ∞² p.
7	31.2	23.6	88	75	8	10	------	
8	33.2	24.3	88	78	10	10	------	☋ ↘ p.
9	32	24	88	57	10	8	------	
10	33.6	24.8	87	65	10	10	------	d a. p. ↙° p.
11	31.2	24	92	75	10	10	------	
12	31.8	25.2	87	61	9	7	------	◠° d° a. ↙² ↘ p.
13	33	24	92	71	10	8	------	
14	33	24.2	88	71	4	10	------	
15	33.1	24.6	88	80	10	10	30.5	d a. ┬² p ☋ ↘ p.
16	32.6	24	95	64	10	9	23.6	p a. ● p.
17	32.4	23.5	89	77	10	10	------	d a.
18	30	23.4	85	76	10	8	------	d a. p. ◠² ↙² ↘ p.
19	30.5	23	96	84	10	10	8.6	d ◠ a. d° ↙² ↘ p.
20	29	24.6	93	84	10	10	------	d p.
21	29.5	23.4	95	74	10	10	------	d p.
22	31.4	23.8	93	73	10	10	------	
23	31.3	24.2	92	78	10	10	------	d ◠° a. d° ↙° ↘ p.
24	30	23.4	92	84	10	10	------	┬ p.
25	29.5	23.8	91	83	10	10	------	┬² ↘ p.
26	30	23.3	91	79	10	8	58.4	┬° ●² p.
27	29.8	23.6	91	72	10	10	10.7	↙² ☇◪° ● p.
28	30	23.6	95	77	10	7	24.9	◠° d a. ↙° ● p.
29	31.4	23	93	87	10	10	51.8	d a. p. ┬ p p.
30	29.5	23	92	84	10	10	------	● d a.
Mean	31.3	23.9	90.8	74.1	9.6	9.2	------	
Total	------	------	------	------	------	------	221.2	

METEOROLOGICAL DATA, ETC.—Continued.

SAN JOSE BUENAVISTA.

[$\phi = 10° 44'$ N; $\lambda = 121° 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	23.4	95	74	10	8	------	● a. ◟ p.
2	33.2	23.3	89	68	4	7	------	d ◟ p.
3	32.4	23.5	84	72	10	10	7.6	● ◟ p.
4	31.1	22.7	91	74	10	8	------	● a. ◟ p.
5	33.2	24.5	88	66	4	8	29.2	● ◟ p.
6	33	22.6	91	58	8	7	------	
7	32.5	22.8	83	66	2	10	14	● ⊤ ◟ p.
8	32.5	23.5	87	83	10	10	1.3	☂ ●° p.
9	32.5	24	90	83	9	10	7.9	☊ a. ◪ ●° p.
10	32	22.6	91	67	2	2	------	☊ a.
11	32	24	86	84	10	10	11.4	● p.
12	31.4	23.6	94	88	5	10	26.5	● ⊤ p.
13	31.6	22.6	94	73	8	10	------	☊ a. ◟ p.
14	32.1	24	93	73	4	4	.8	●° ◪ d p.
15	32.6	23.7	91	66	4	10	------	☊ a. ◪ p.
16	32.8	24.6	87	68	6	7	4.3	● p.
17	32.5	24	85	73	8	10	19.6	☊ a. ● ◪ p.
18	32.1	23.6	95	71	10	10	------	
19	28.9	24.5	89	93	10	10	10.4	d a. ● p.
20	29.3	23.1	92	81	10	10	------	
21	30.9	23.9	91	85	10	10	13.2	⊤ ● p.
22	31.1	22.9	95	96	10	10	19.4	☊ a. ● ☂ ◟ p.
23	30.9	23	92	91	10	10	10.6	☊ a. ● ⊤ p.
24	30.5	23.5	88	84	10	10	1.8	●° p.
25	30	23	91	84	8	10	2.1	◠ d a. d ⊤ ◟ p.
26	28.5	23.3	94	84	10	10	7.9	d ● a.
27	31.2	22.6	87	79	3	10	56.6	●² ◟ p.
28	31.1	23	93	87	10	10	8.9	●° a. p.
29	29.7	23.2	96	75	10	10	3	● a.
30	29.5	23.5	93	78	10	10	------	● a.
Mean	31.4	23.4	90.5	77.5	7.8	9	------	
Total	------	------	------	------	------	------	256.5	

CUYO

[$\phi = 10° 51'$ N; $\lambda = 121° 01'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	9	9	------	
2	------	------	------	------	9	9	------	
3	------	------	------	------	9	9	5.1	⊤ ● a.
4	------	------	------	------	9	9	------	●° a. ⊤ a.p. ◟ p.
5	------	------	------	------	9	9	------	◪ p.
6	------	------	------	------	8	8	------	◯ p.
7	30.5	------	------	------	8	8	4.8	● p.
8	30.9	25.3	92	76	9	8	30.7	● a. d ◪ ●² p.
9	31.6	23.6	91	75	10	9	------	◪ ●² a. ⊤ p.
10	33.4	24.7	96	67	7	7	2.5	◪ p.
11	30.4	24.1	94	77	9	9	------	● a. ◪ p.
12	30	24.9	93	86	8	9	2.3	◪ a. ● p.
13	32.7	25	95	79	8	8	------	
14	32.9	24.7	93	69	9	7	12.4	◪ a. ☋ ⊤ p.
15	32.3	24.3	98	66	9	9	6.6	● a. ☋ p.
16	30.8	24.7	93	85	10	10	1	● a. ⊤° a. p.
17	31.4	26.2	84	75	9	9	15.2	◪ ●° a.
18	31.5	23.6	97	76	9	9	2	●² a. ☋ p.
19	27.7	23.4	95	88	10	10	19.9	d ●² a. ●° a. p.
20	27.7	23.7	92	87	10	10	20.6	●² a.
21	31.3	24.1	94	79	9	9	1	●° p.
22	29.6	24.6	91	84	10	10	28.4	●² ⊤ a.
23	30.3	26.2	85	81	10	9	23.1	d a. ● a. p.
24	30.6	23.8	95	80	10	9	7.2	● a. ●° p.
25	30.7	24.6	97	75	9	9	4.8	◠ ● a. ⊤ p.
26	26.2	24.1	97	93	10	10	14.2	● a. p. d p.
27	31	23.8	95	77	10	8	30	◠ ●² a. ● p.
28	31	23.7	92	75	10	9	5.1	
29	29.5	23.3	95	80	10	9	20.3	● a.
30	29.7	24	96	76	10	9	------	● d° a.
Mean	30.6	24.4	93.5	78.5	9.2	8.9	------	
Total	------	------	------	------	------	------	257.2	

BORONGAN.

[$\phi = 11° 37'$ N; $\lambda = 125° 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	23.8	98	70	6	6	------	☊ ≡ a. ⊤ ◟ p.
2	31.4	23.7	97	68	7	6	2.3	≡ ◯ a. ●° ◟ p.
3	31.4	23.4	97	68	4	7	7.6	≡ a. ◯ ● ◠ ◟ p.
4	30.8	24	97	69	8	8	11.5	≡ ● a.
5	31.1	24.2	96	78	9	7	2.5	≡ a. ● a. p.
6	31.3	22.7	93	77	6	7	------	☊ a.
7	31.6	23.2	98	75	7	8	70.9	☊ ≡ ◯ a. ◟ p.
8	27	23.5	98	85	10	10	13.5	●° ≡ a. ● ◟ p.
9	30.6	23.4	98	68	9	7	------	≡ a. ⊤ p.
10	31.4	21.6	98	68	8	6	------	☊ ≡ a.
11	27	24	96	97	9	10	36.6	⊤ a. ● a. p. ◟ p.
12	31.2	23.4	97	68	8	5	5.1	≡ ●° ◠ a. ● ◟ p.
13	31.1	24	97	74	8	6	5.9	⊤ ≡ a. ● a. p.
14	28.6	23.4	97	92	10	9	47.5	≡ ●² ⊤ a. ☋ ◟ p.
15	30.9	23.1	97	86	4	7	23.7	≡ a. ●² a.p. ⊤ p.
16	31.3	23.8	97	75	8	8	4.8	● ≡ a. ●° p.
17	29.5	23.8	97	86	10	10	11.7	● ≡ a. ●² p.
18	31.2	22.6	99	72	10	9	20.3	≡ ◯ a. ●² p.
19	29.6	23.6	96	72	10	10	11.7	≡ ●² a. ◟ ☋ p.
20	30.4	23.4	97	79	10	10	.3	● ≡ a. ◯ ☋° ●° p.
21	30	23.3	97	74	9	9	11.9	≡ ⊤ ●° a. ◟ ●² p.
22	31.2	23.5	97	73	10	9	19.3	● ≡ a. ⊤ ●² p.
23	29.5	24	97	85	9	7	.9	≡ ●° a. d p.
24	31.5	23.2	97	72	10	6	------	●° a. ◯ ⊤ ◟ d p.
25	30.4	22.8	97	89	6	10	2.3	≡ d a. ⊤ ◟ ●° p.
26	30.5	22.2	98	80	6	10	15.8	≡ a. ●² ◟ p.
27	30.7	23	96	70	5	8	2.5	≡ a. ●° ◟ p.
28	30.5	23.3	95	69	10	4	.3	● ◠ a. ◟ p.
29	30.4	22.8	98	80	3	9	33.8	●° ≡ a. ●² ◟ ° p.
30	30.9	23	97	69	8	7	16	☊ ≡ d a. ● p.
Mean	30.5	23.3	97	76.3	7.9	7.8	------	
Total	------	------	------	------	------	------	378.7	

MASBATE.

[$\phi = 12° 22'$ N; $\lambda = 123° 36'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	25.4	98	------	7	8	26.5	
2	32.6	25.2	98	------	7	6	9.9	
3	32.2	24.2	98	------	7	8	------	
4	32	26.2	98	------	8	8	------	
5	33.2	26.2	97	------	7	6	------	
6	32.5	24.4	99	------	6	5	------	
7	34.2	25.6	99	------	9	7	------	
8	32	25.8	99	------	9	9	------	
9	32.5	25.8	98	------	8	9	------	
10	33	25	96	------	6	4	------	
11	32.2	26	95	------	6	10	.5	
12	32.8	25	98	------	8	7	------	
13	------	25.2	98	------	8	------	------	
14	32.6	25.6	97	------	4	9	------	
15	32.6	25	98	------	8	4	------	
16	32.6	26	99	------	8	7	6.4	
17	32.2	24.2	99	------	9	8	------	
18	32.4	25.5	98	------	8	8	1.5	
19	32.2	26.2	94	------	9	9	------	
20	32.8	24.6	98	------	9	9	8.9	
21	31.8	24.2	98	------	10	9	------	
22	32.2	25	98	------	9	9	1.3	
23	30	24.6	98	------	10	9	21.1	
24	31.4	24.6	98	------	8	8	.6	
25	32	25	98	------	9	9	1.5	
26	29.5	24.8	98	------	9	10	6.8	
27	29.8	23.6	97.	------	8	10	50.8	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
Mean	32.1	25.1	97.7	------	7.9	7.9	------	
Total	------	------	------	------	------	------	------	

METEOROLOGICAL DATA, ETC.—Continued.

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.9	24.5	93	76	9	8	1	d a. ◟ p.
2	32.6	24.1	96	71	6	8	.5	◟ p.
3	33.2	24.8	93	64	7	8	7.9	d ⌐ a. ◟ p.
4	33	24.9	89	65	8	6	14	● a. p. ⌐ p.
5	33	24.3	83	70	4	7	------	◟ d p.
6	33.2	24.7	81	62	4	2	------	◟ d p.
7	33	25.6	84	66	10	3	2.8	◟ p.
8	33	23.6	88	57	10	5	17.3	p a. ◟ p.
9	32.4	24.5	93	79	5	8	1	● a. ◟ p.
10	33	24.4	84	65	6	4	------	◟ p.
11	32.8	24.9	76	67	5	7	15	● ⌐ p.
12	30.9	24.6	83	73	9	10	1.3	◟ p p.
13	32.3	24.6	83	72	8	8	------	◟ p.
14	33.1	26.7	82	80	7	8	1	●° a. ◟ p.
15	33.3	25	86	65	5	2	2	● ⌐ p.
16	33	26.4	81	64	9	4	------	d a. p. ◟ p.
17	32.9	26.1	81	61	7	5	------	◟ p.
18	33.9	26.4	80	60	9	6	------	◟ p.
19	33	26.6	80	68	9	9	18.3	⌐ ● p.
20	29.9	24.1	96	88	10	10	17.3	● a. p. ⌐ p.
21	30.4	23.1	97	74	10	9	1.8	⌐ ● a. p.
22	31.4	23.6	93	78	10	10	14	d a. ⌐ ● p.
23	30.2	24.4	98	78	9	9	50	●² a. p. ⌐ p.
24	30.2	23.2	97	77	10	9	37	● a. p. ⌐ p.
25	27.7	23.3	98	88	10	10	26.9	● a.
26	30.6	23.1	97	74	10	9	.5	● a. ◟ p.
27	31.4	23.1	92	71	10	10	.5	◟ p p.
28	31.4	24.1	91	66	10	8	3.1	●° a. p. ⌐ p.
29	31.3	23.9	93	70	10	10	.6	d a. p. ◟ p.
30	------	23.7	88	70	10	8	------	◟ p.
Mean	32	24.5	88.5	70.6	8.2	7.3	------	
Total	------	------	------	------	------	------	233.8	

LAOANG.

[ϕ=12° 35′ N; λ=125° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	23.5	90	72	2	8	------	
2	31.1	23.3	93	71	1	2	------	
3	31.6	23.8	91	76	3	8	1	
4	31.4	23.7	96	70	9	7	5	
5	31.8	24	96	66	2	3	6.1	
6	30.8	23.7	92	69	5	4	------	
7	31.3	24	95	69	8	7	------	
8	31.6	24	95	81	9	8	7.9	
9	31.4	25	93	72	6	5	.3	
10	31.7	23.1	94	63	8	3	------	
11	28.9	23.3	87	97	6	10	12.7	
12	31.1	22.7	85	70	5	6	5.9	
13	31.1	23.6	95	77	9	7	.3	
14	30.1	23.1	------	76	5	7	1.1	
15	31.1	23.3	93	78	5	6	------	
16	------	------	------	------	------	------	------	
17	------	------	------	------	------	------	------	
18	------	------	------	------	------	------	------	
19	------	------	------	------	------	------	------	
20	------	------	------	------	------	------	------	
21	------	------	------	------	------	------	------	
22	------	------	------	------	------	------	------	
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
Mean	31.1	23.6	92.5	73.8	5.5	6.1	------	
Total	------	------	------	------	------	------	------	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.4	25	99	------	5	4	------	◟ p.
2	34.4	24.2	98	------	6	4	------	◟ a. p.
3	34.4	24	89	------	6	7	------	
4	34.3	25	------	------	8	5	------	◟ p.
5	35.8	24.4	------	------	4	5	4.3	d a. p.
6	33.9	24	94	64	5	8	.8	● ⊤ a. p p.
7	34.2	24.9	98	------	4	8	------	d a.
8	33	24.2	85	64	4	5	9.1	● p.
9	33.8	23.5	90	68	4	6	------	
10	33.6	25	94	65	5	5	4.8	● p.
11	32.1	24	89	76	4	6	2.3	● p.
12	33	25	------	76	9	6	------	
13	32.8	25	94	------	4	8	------	☊ a.
14	33.6	23.8	------	68	5	5	------	◟ p.
15	33.6	25.6	------	------	4	4	1.8	●° p.
16	34	24.4	------	------	5	6	------	d a.
17	33.6	25.5	------	------	7	5	.3	∞ p a.
18	33.6	24.3	------	69	7	6	------	d a.
19	31.5	25.5	85	76	7	8	1.5	☋ d a. ●° ◟ p.
20	33.9	23.3	96	66	9	4	------	
21	33.4	23.5	88	66	7	6	------	
22	31	25	95	75	6	9	13.4	⊤ a. ● a. p.
23	31	22	89	75	10	7	10.1	● a. p.
24	29.7	------	90	75	9	5	7.6	● a. p. ◟ p.
25	33	------	88	75	7	9	9.4	● a. p.
26	31	23.4	87	84	5	10	13.5	p a. ● a. p.
27	32.1	23.5	92	74	7	5	------	⊤ a.
28	31.3	23.6	89	82	4	4	------	
29	31.7	24.2	93	81	6	5	------	
30	31.2	22.4	98	75	9	8	------	
Mean	33	24.2	91.8	72.7	6.1	6.1	------	
Total	------	------	------	------	------	------	78.9	

SUMAY, GUAM (LADRONES ISLANDS).

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	23.8	84	67	1	5	------	
2	31	25.6	84	65	1	3	------	
3	31	25.4	81	65	1	5	------	
4	29.8	25.6	86	70	3	6	------	
5	31.2	26.2	78	65	10	4	------	
6	30.4	23.6	80	77	1	10	------	
7	31.2	25.6	80	64	1	5	------	
8	31.6	25.6	81	64	1	3	6.4	
9	30.8	24.4	85	69	10	10	------	
10	30	25.8	80	77	1	5	3	
11	30.8	24.6	80	71	1	6	5.6	
12	30.8	23.8	92	66	6	5	6.3	
13	29.8	24.6	89	72	5	5	2.5	
14	30	23.2	85	68	6	6	------	
15	30.6	26.4	84	68	5	7	------	
16	30	26	84	71	1	5	3.8	
17	30	25.2	84	67	1	6	1.3	
18	29.6	25	84	83	2	10	28	
19	29	24	92	80	10	10	1.3	
20	29	25.4	84	86	8	10	14.5	
21	30	23.4	89	68	10	6	.8	
22	30	25.8	89	71	8	10	2	
23	30	35.2	89	69	10	10	.5	
24	30.4	26.2	84	66	1	4	------	
25	30.6	24.2	84	62	2	3	------	
26	30.4	26.8	83	66	1	1	------	
27	30.8	25.6	84	70	5	6	------	
28	30.8	25.8	84	65	6	7	3.8	
29	29.2	25	87	78	7	8	8.9	
30	29.2	25	87	95	2	10	34.3	
Mean	30.3	25.1	84.6	70.8	4.2	6.4	------	
Total	------	------	------	------	------	------	123	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	23.7	97	76	10	10	2.8	● ☇ a. ⊤ p.
2	32.3	23.4	90	73	4	3	.5	⊤ a. ☾ p.
3	31.9	23.6	84	73	9	7	42.2	⊤ a. ●² ☇ p.
4	31.8	23.2	93	67	10	3	98.6	●² ☇ p.
5	32.7	23.5	92	58	8	8	4.6	● p.
6	32.6	23.6	94	60	9	3	31.2	●² ☇ p.
7	32	24	95	71	10	7	------	☾ p.
8	32.2	24	87	77	10	7	------	
9	32.1	23	91	66	8	7	------	☊ ⊤ a. ☾ p.
10	32.7	23.6	86	67	7	3	------	☇ p.
11	32.6	24.4	89	64	7	7	14	● ☇ p.
12	30.1	23.4	93	87	9	10	9.2	●° a. p.
13	32	23.4	92	70	9	9	12.4	☇ ● p.
14	32.1	23.8	98	69	8	8	8.9	☇ ● a. ● ☾ p.
15	32.5	24.5	87	67	3	3	16.4	p a. ● ☇ p.
16	32.1	24.5	91	70	5	3	14	● ☇ p.
17	32.1	23.4	96	65	7	10	1	☋ p° ☇ p.
18	32.9	22.8	88	60	10	7	4.1	p° p.
19	32.1	25	93	80	10	10	22.1	● ◠° a. ●² ☇ p.
20	29.2	23.4	94	77	10	10	25.9	⊤ a. ☇ ●² p.
21	31.1	22.5	95	76	10	10	8.9	⊤ a. ☇ ☾ ● p.
22	30.6	23.9	94	70	10	10	14.5	p° ⊤ a. ☇ ● p.
23	32.8	24	97	69	10	10	17.8	p a. ● p.
24	31.2	23.7	96	70	10	10	53.3	◠° ●° a. ☇ ●² p.
25	30.7	23.5	97	76	10	10	.5	d° ⊤ a. ☇ p.
26	30.7	23.1	97	76	9	10	------	⊤ ●° p.
27	31.5	22.7	95	73	10	10	11.2	● ☇ p.
28	31	22.9	96	87	10	10	3.8	⊤ ●° p.
29	31.1	23	95	72	10	10	5.8	☇ ●° p.
30	32	22.3	96	75	10	10	------	☇ p.
Mean	31.7	23.5	92.9	71.4	8.7	7.8	------	
Total	------	------	------	------	------	------	423.7	

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	25.5	85	82	5	3	------	☾ p.
2	31.5	24.4	91	70	6	5	2.8	p a. d ☾ p.
3	31.4	23.2	92	74	7	7	1	p a. p. ☾ p.
4	32.5	22.4	92	72	4	6	.5	d² ☾ p.
5	31.6	25	87	75	8	6	3	● ◠² a. ○ ⊕ ☾ p.
6	32.5	23.3	96	73	7	4	1	⊤ ● a. ☾ p.
7	32.4	23	93	71	10	7	------	☾ p.
8	32	22.5	94	73	5	7	1.3	d° ☾² p p.
9	32	24.5	85	71	9	6	1.6	● ◠² a. ○ ☾ d° p.
10	31.5	23.7	93	71	4	4	------	p ◠² d° a.
11	30	23.5	------	78	7	10	21.8	☋° ● a. ☇ ● p.
12	32	24.2	86	82	5	9	1.3	d a. ●° a. p.
13	31.7	23.5	96	72	6	8	19.6	d p ⊤ a. ◠ a. p.
14	31.8	23.9	98	75	4	6	1.3	p a ●° p.
15	31.7	22.9	98	70	4	5	9.1	●° a. ● ☾ p.
16	32	23.4	97	77	8	7	3.3	● a. p. d² p.
17	32	23.5	96	67	6	9	------	◠ ○ ⊕ p.
18	33	23.6	94	85	9	10	7.2	d² a. ☋° ● ☾ ☋ p.
19	32.2	25.4	86	80	7	8	7.9	d a. ● ☾ ☋ p.
20	33.5	23	97	76	9	9	8.1	◠ a.
21	31	23.2	93	76	10	10	1.3	● a. ⊤ ☾ ☋ p.
22	29.5	23.4	98	76	9	10	29.7	● a. ●° ☾ p.
23	29.5	24.2	96	78	10	9	9.7	☇ ● a.
24	30.5	23.2	97	78	10	8	.8	●° a. ⊤² d² ☾ p.
25	31.5	22.7	96	79	4	8	14.7	● ⊤ a. ☾ ☾ ☋ p.
26	32	22.4	96	64	6	9	.8	☊ a. ●° ☾ p.
27	31.5	25	85	79	10	7	1.3	p ☾ p.
28	30.7	25.5	81	71	9	4	------	d° ☾ p.
29	31.5	23.4	95	80	7	5	1.8	p ☾ p.
30	31	24.4	96	72	9	9	7.4	∞ ☾ ● p.
Mean	31.6	23.7	92.7	74.9	7.1	7.2	------	
Total	------	------	------	------	------	------	158.3	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35	22.5	97	83	8	8	2.5	●° p.
2	34.5	21.5	100	------	9	9	------	
3	34.3	21.7	98	------	8	7	------	
4	34.8	22	98	------	7	6	------	
5	34.5	22.4	98	------	7	6	------	
6	34.3	21	96	93	3	10	5.8	● p.
7	34.3	21.7	97	------	9	8	------	
8	34.4	21.3	99	------	8	9	------	≡ a.
9	34.1	23.3	98	------	9	8	------	
10	34.7	21.5	97	------	6	7	------	
11	34.8	20.1	96	92	3	10	17.3	● p.
12	33.3	22.2	98	73	8	8	------	
13	33.6	------	97	------	8	7	------	
14	34	21.2	99	------	6	8	4.1	⊤° ● p.
15	34.1	20.7	98	------	3	5	------	
16	33.9	22	98	64	6	9	------	
17	34.4	22.3	98	------	7	8	------	
18	33.6	22	97	91	9	10	5.6	● p.
19	34.5	22.2	97	62	6	8	------	
20	32.9	21.9	98	85	9	10	------	d p.
21	33.2	21.9	98	82	10	9	.3	●° p.
22	32.2	22.4	98	------	10	10	1.3	d² p.
23	30	22.4	98	78	10	9	4.9	● a. p.
24	33.3	22.6	98	84	8	9	9.9	● p.
25	32.5	21.9	98	96	7	10	22.9	● ⊤° p.
26	31.5	21.1	98	94	8	10	22.4	● p.
27	32.5	23	98	86	10	9	------	
28	31.7	22.9	97	85	10	10	5.6	● p.
29	32.9	21.7	100	91	10	10	1.5	≡ a. ●° p.
30	33.5	21.9	98	------	10	9	4.1	● p.
Mean	33.6	21.9	97.8	83.7	7.7	8.5	------	
Total	------	------	------	------	------	------	108.2	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	23.7	97	71	10	7	1.8	● a. ○ p.
2	33.5	23.7	97	58	4	4	------	
3	33.1	24.1	94	60	5	5	------	
4	34.3	23.7	94	57	6	4	------	
5	33.6	24.2	93	57	5	6	------	
6	35.3	24.4	92	55	3	4	------	
7	34.6	24	91	54	5	6	------	
8	34.3	23.9	92	57	5	6	------	
9	34.3	22.5	91	60	5	5	------	
10	34.7	24.2	94	51	3	3	------	
11	35.7	24	93	45	1	6	29.2	⊤² ●² p.
12	33.7	22.4	97	85	5	9	.3	d p.
13	34.4	23.7	97	63	6	7	------	☇ p.
14	33.8	23.9	95	60	4	5	------	
15	34.7	24.9	93	51	4	3	------	☇ p.
16	35.7	25.1	93	51	5	5	------	
17	34.9	24.1	93	59	4	7	------	○ p.
18	35	23.8	95	57	4	6	.5	d p.
19	33.8	24.4	98	56	6	6	------	☋ p.
20	33.3	23.9	95	74	7	7	6.9	d p.
21	31.8	23	97	71	6	7	1.3	d a. p.
22	31.8	23.6	95	65	6	6	------	
23	32	23	95	75	6	7	------	
24	32.3	23.3	94	68	6	7	4.3	d a.
25	31.3	24.3	94	76	7	7	11.9	● a. p.
26	31.7	23.1	97	74	7	7	------	⊤ p.
27	33.3	23.3	97	66	7	7	17.5	
28	31.8	23	97	91	7	9	2.5	● a.
29	31.9	23.1	97	77	7	7	------	
30	31.7	22.8	97	72	6	7	------	
Mean	33.5	23.7	94.8	63.9	5.4	6.1	------	
Total	------	------	------	------	------	------	76.2	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.5	20.3	97	66	5	7	------	☊ ≡ a. d ⊤° p.
2	29.7	20.5	98	62	3	8	------	≡ a.
3	29.9	20.6	97	63	6	8	1.8	≡ a. p p.
4	30	20.5	97	63	7	7	------	≡ a.
5	30.2	20.8	98	64	5	9	------	⊤° ◠ p.
6	29.8	20.5	98	65	7	8	------	⊤° p.
7	30.3	20.4	98	64	5	9	4.1	p ⊤° p.
8	30.2	20.5	97	64	7	9	------	≡ a. ⊤° p.
9	30.6	20.8	98	63	3	8	3.6	d ● ° p.
10	28.3	20.5	98	66	7	9	------	≡ a. p° ⊤° p.
11	30.8	20.7	97	63	3	7	9.7	☊ ≡ a. ● ⊤ p.
12	30.3	20.5	97	64	8	9	------	≡ a. p° p.
13	30.6	20.8	98	65	5	7	------	☊ ≡ a. ⊤° ◠ p.
14	30.9	20.7	98	65	7	8	------	≡ a.
15	30.5	20.7	97	66	2	5	------	
16	31.3	21.2	97	61	5	8	------	☊ ≡ a. ⊤° p.
17	30.5	20.9	98	64	9	7	------	≡ a. p° p.
18	30	21	98	64	6	8	16.5	☊ ≡ a. d p.
19	29.4	20.5	97	65	10	7	------	● a.
20	29.4	20.7	98	65	7	9	------	≡ a. d p.
21	28.8	20.6	99	66	5	8	------	≡ a. ⊤° p.
22	28.6	20.5	98	67	7	8	------	⊤° a. p.
23	28.8	20.7	98	67	6	7	------	☊ ≡ a. ⊤° p.
24	29.3	20.4	98	65	3	9	3.3	●° p.
25	29.2	20.3	98	65	8	7	6.6	≡ a. ◹° p.
26	28.6	20.1	97	68	5	9	61.2	☊ ≡ a. ◹ ●² p.
27	28.7	20.2	97	65	4	7	19.8	≡ a. ●° ⊤² p.
28	28.8	20	97	64	6	9	------	☊ ≡ a. ⊤² p.
29	28.5	20	98	66	7	9	16.5	● ⊤° p.
30	28.5	20	98	66	5	7	------	≡ a. d ⊤° p.
Mean	29.6	20.5	97.6	64.7	5.8	7.9	------	
Total	------	------	------	------	------	------	143.1	

SANTA CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.6	23	95	86	8	9	0.1	◹ a. p. d ◺ p.
2	35.5	23	87	58	5	6	------	☊² ◠ a. ◹ p.
3	35.5	23.5	85	55	8	5	------	☊° ◺ a. ◹ p.
4	33.7	23.9	92	58	7	3	------	◺ ☊° a. ◹ p.
5	33.9	23.5	85	68	6	8	------	☊° a. ◹ a. p. d p.
6	33.7	23.4	91	56	3	2	------	☊° a. ◺ a. p.
7	34.1	23.2	92	58	5	7	------	☊² ◺ a. ◹ p.
8	34.3	22.5	91	56	8	8	------	◠° a. p. ◹ p.
9	34.7	22.5	91	53	8	7	------	☊² a. ◹ a. p.
10	35.1	23.3	85	52	3	5	------	◺ ☊ a. ◹ p.
11	33.9	23.7	85	56	2	7	.1	d a. p. ◠° ◹ p.
12	33.8	23.4	85	89	6	10	6.1	◠° a. ◹ a. p. ●
13	32.7	23.4	95	67	5	8	24	≡° a. ● ◹ a. p.
14	34.3	22.5	95	59	6	6	------	● ≡° a. ◹ a. p.
15	35.3	23.2	88	53	5	5	------	◹ ☊ a. ◺ p.
16	33.5	23.7	88	56	4	5	3.3	d° ◺ a. ◹ p.
17	33.2	23.4	97	62	8	8	------	●° ≡ ◹ a. p. ●
18	32.7	23.1	97	65	6	8	34.5	d° a. ◠ ● ◹ p.
19	31.7	22.7	96	73	10	8	8.2	● a. ◠² d p.
20	------	------	97	------	10	------	------	≡ a.
21	------	------	------	------	------	------	.8	◹° d p.
22	30.1	22.9	93	90	10	10	8.9	≡° a. ◹ ● p.
23	28.6	22.6	98	88	10	10	4.1	● a. d a. p.
24	33.1	23	92	65	10	8	.1	≡° d° a. ◹ p.
25	28.8	22.7	96	86	8	9	4.6	☊² ◹° ● a. ◺ p.
26	34.3	21.5	97	70	7	8	2.3	☊² a. ◹ ● p.
27	32.2	22	97	70	10	10	3.7	☊² ≡ a. ● p.
28	32.4	22.1	96	68	10	9	35.8	d ● a. p. ◹ p.
29	33.2	21.5	97	68	9	9	14.7	◠ a. ◠° ◹ ● p.
30	33.2	21.8	97	89	9	9	.8	●° a. p. ◹ p.
Mean	33.3	22.9	92.4	66.9	7.1	7.4	------	
Total	------	------	------	------	------	------	152.1	

SAN ANTONIO.

[ϕ=14° 22′ N; λ=121° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.9	20.4	98	63	7	10	2.8	p. p.
2	30.8	21.3	95	62	7	6	------	
3	30.7	20.2	91	62	6	7	------	
4	------	20.2	97	62	6	10	------	
5	31.3	20.2	98	64	6	6	------	
6	31.2	20.8	98	63	6	7	------	
7	31	20.2	97	64	6	10	------	
8	32.3	20.2	97	65	6	6	------	
9	31	21.8	96	62	8	6	------	
10	30.8	20.2	98	61	6	6	------	
11	------	21.8	98	50	6	7	20.3	● p.
12	30.8	21.2	97	60	8	6	38.1	● p.
13	30.6	20.2	97	63	6	7	18.3	◠ a. ● p.
14	31	20.3	97	59	6	7	11.4	● a. ◠ a. p.
15	------	20.2	93	58	6	6	5.1	◠ ● p.
16	31.2	20.2	96	60	6	6	------	
17	30.7	20.2	96	69	7	8	------	
18	31.6	20.2	97	63	6	9	------	
19	30.7	20.4	97	64	6	6	5.1	● p.
20	31	20.2	97	63	7	6	14.5	● p.
21	31.2	20.2	98	58	6	7	20.3	● p.
22	30.8	20.3	98	63	7	6	13.7	● p.
23	31.6	20.3	98	59	7	.6	11.7	● p.
24	31	20.2	97	64	8	6	------	
25	------	20.4	96	58	8	6	------	
26	31.6	20.5	92	61	6	7	20.3	● p.
27	30.8	20.2	97	63	6	6	5.1	● a.
28	30.8	20.4	98	69	9	6	------	
29	31	20.2	98	62	6	7	------	
30	------	20.6	98	64	7	8	------	
Mean	31.1	20.5	96.7	61.9	6.6	6.9	------	
Total	------	------	------	------	------	------	186.7	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	22.7	94	67	8	7	------	⊤ a. ◹ d p.
2	------	23.8	88	66	6	7	9.9	⊤ ◺² ● p.
3	------	23.2	96	68	4	7	------	≡ a. ◹ p.
4	------	22.8	95	67	4	4	------	☊ ≡° a. ⊤ ◺ p.
5	------	22.5	80	60	4	4	------	⊤ ◠ d ◺ p.
6	------	22.4	94	63	1	2	------	☊ ≡° a.
7	------	22.7	97	69	1	3	5.6	☊ ≡ a. ⊤ ◺ ● p.
8	------	23	97	70	8	4	24.1	◹² ● p.
9	------	22.3	91	61	5	3	9.7	● d ◹° p.
10	------	23.4	89	64	6	4	------	d ◹ p.
11	------	22.5	92	65	1	4	------	◹ p.
12	------	23.1	94	69	4	10	2.3	d a. ⊤ ● p.
13	------	21.5	95	62	1	5	4.6	☊ a. ◹ ● p.
14	------	23.7	97	71	5	7	------	⊕ a. p. ⊤ d ◺ p.
15	------	23.7	94	67	2	4	------	◹ p.
16	------	22.8	87	63	1	7	1.3	☊ a. ◹ d ● p.
17	------	22.2	91	52	7	7	4.3	≡ a. ⊤ ● ◺ p.
18	------	21	93	60	10	8	14.9	⊕ ◹ ● p.
19	------	22.7	87	59	5	8	------	◹ p.
20	------	23	93	63	10	6	5.8	◠ a. ⊤ ● ◺ p.
21	------	22.9	96	75	10	10	5.5	◹ d ● p.
22	------	23.4	91	62	10	10	------	
23	------	23.2	94	81	9	10	1	◹ d a. ●° ◺ p.
24	------	23.6	86	82	10	10	6	◹ d ● p.
25	------	22.9	96	89	9	10	9.9	◹² ● p.
26	------	22.9	97	82	7	10	11.3	◹ d ● p.
27	------	22.8	92	82	10	10	17.2	⊤ d a. ● a. p.
28	------	23.5	94	94	10	10	6 1	◠ ⊤ a d ● a. p.
29	------	23.9	83	75	10	10	28.7	◠ a. p. ● ◹ p
30	------	23.2	94	91	10	10	37.1	◹ ● a. ●² p.
Mean	------	22.9	92.2	70	6.3	7	------	
Total	------	------	------	------	------	------	205.3	

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[$\phi = 15°\ 30'$ N; $\lambda = 120°\ 35'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.6	23.8	95	58	9	3	------	☊ a.
2	34.6	24.2	97	54	4	2	16.8	☊ a. ● ☐☌ p.
3	35	23.7	97	55	6	3	16.8	☊ a. ● ☐☌ p.
4	34.2	23.8	95	54	3	2	------	☊ a.
5	34.7	22.3	93	59	4	4	------	☊ a.
6	35.1	23.3	98	58	3	3	------	☊ a.
7	36.2	22.8	96	47	3	3	.8	☊ a. ● p.
8	36	23.7	95	57	5	3	------	☊ a.
9	35.7	23.2	97	56	5	8	.5	☊ a. ● p.
10	35.7	23.7	96	53	4	4	------	☊ a.
11	35.5	23.6	96	54	0	5	------	☊ a.
12	34.2	23.6	94	54	7	6	------	☊ a.
13	36.2	22.4	95	54	1	7	------	☊ a.
14	34.8	24.4	94	54	2	5	------	☊ a.
15	36.2	24.2	95	53	7	6	------	☊ a.
16	35.4	23.2	97	65	2	9	------	☊ a.
17	35.4	22.9	95	61	5	8	------	☊ a.
18	36.4	21.8	92	50	7	8	------	☊ a. d p.
19	35	22.8	97	49	4	4	------	☊ a.
20	35.7	22.8	93	56	4	7	1.8	☊ a. ◐ d p.
21	34.2	24	95	66	10	9	------	d a. ☋ p.
22	33.2	23	94	61	8	10	------	☊ a.
23	32.4	22.9	95	63	9	10	------	☊ a.
24	35.7	23.3	95	61	6	5	4.6	☊ a. d p.
25	34.1	22.4	96	58	4	7	------	● a.
26	36.4	22.3	96	57	2	10	52.1	☊ a. ● ☿ p.
27	28.3	22.3	97	85	10	10	6.1	☊ ≡ a. ● ☿ d p.
28	30.2	23.4	96	80	10	10	3.6	☊ a. d ☿ p.
29	33.4	22.6	90	60	10	8	2	☊ a. ● ☿ d° p.
30	32.2	23.3	96	82	10	9	2.8	☊ a. ● d ☾ p.
Mean	34.6	23.2	95.2	59.1	5.5	6.3	------	
Total	------	------	------	------	------	------	107.9	

BALER.

[$\phi = 15°\ 40'$ N; $\lambda = 121°\ 34'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	23.4	96	67	10	6	2	
2	------	22.6	96	71	10	4	6.6	⊕ ☾ p.
3	------	23.6	95	74	10	8	------	☾ p.
4	------	23.5	93	81	8	6	13.5	● ☾ p.
5	------	22.5	94	82	10	10	6.1	● ☾ p.
6	------	22.8	95	69	10	2	------	⊕ p.
7	------	22.5	91	72	1	2	------	
8	------	23.9	93	63	10	10	------	⊕ ☾ p.
9	------	23.3	95	67	10	2	35.6	●² p.
10	------	23.6	93	72	10	2	.5	p p.
11	------	23.4	93	72	10	10	9.9	● ⊕ p.
12	------	24.5	96	80	10	10	1.3	p ☋ p.
13	------	24	96	80	10	10	6.9	
14	------	24.4	95	74	2	4	------	● ☋ a. ⊕ p.
15	------	23.4	94	69	10	1	------	☿ a.
16	------	23.4	91	73	4	7	12.4	● ⊕ p.
17	------	23.5	95	79	10	10	1.1	☿ p.
18	------	22.9	95	83	10	10	3.1	d ◠ a. ⊤ p.
19	------	23.2	95	71	10	8	29.2	
20	------	24.1	94	59	10	10	.5	●² a.
21	------	23.5	95	90	10	10	76.2	●² a. p. ☿ ☋ p.
22	------	22.8	97	73	10	10	2.5	☿ ☋ p.
23	------	24	96	92	10	10	44.2	●² p.
24	------	23.6	97	77	10	10	22.6	p a. ● p.
25	------	23.8	96	81	10	10	14	☿ ● a. ☾ p.
26	------	22.8	96	76	10	10	39.9	● p.
27	------	23.4	96	86	10	10	26.1	☿ d a. ● p.
28	------	23.8	99	87	10	10	11.2	● a. p.
29	------	23.4	97	80	10	10	9.1	● p.
30	------	23.1	96	82	10	10	17.8	☾ ● p.
Mean	------	23.4	95	76.1	9.2	7.7	------	
Total	------	------	------	------	------	------	392.3	

SAN FERNANDO UNION.

[$\phi = 16°\ 37'$ N; $\lambda = 120°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	23.5	96	74	4	2	------	☿² p.
2	32.4	24	95	72	4	2	1.5	●° ☐☌² p.
3	33	24.2	94	67	2	2	------	
4	34.5	24.4	94	66	1	2	------	
5	------	24.6	93	61	1	2	------	
6	------	------	------	------	------	------	------	
7	------	------	------	------	------	------	------	
8	------	------	------	------	------	------	------	
9	------	------	------	------	------	------	------	
10	------	------	------	------	------	------	------	
11	------	------	------	------	------	------	------	
12	------	------	------	------	------	------	------	
13	34.4	------	------	------	------	------	------	
14	34	23.2	92	63	2	4	------	d° p.
15	34.5	24	87	60	5	2	------	
16	34	24.5	91	62	1	1	------	☐☌° p.
17	34.3	24.4	90	62	1	3	------	☿° p.
18	33.3	22.5	93	63	2	2	------	≡° a.
19	35	23.4	98	58	2	1	------	
20	32.7	23.1	92	64	2	2	------	
21	31.7	24.3	93	73	5	8	------	☿² d° p.
22	32.7	23	91	71	1	6	------	☐☌² p.
23	32.5	24.7	95	79	5	10	33	☿² ●² p.
24	32.9	23.6	88	65	1	6	------	☐☌² p.
25	33.4	23	98	57	1	4	2.3	≡° a. ☾° ●° p.
26	32.5	22.6	91	66	1	7	------	
27	29.1	22.8	93	85	10	10	------	d° p.
28	32.3	24.5	79	71	10	10	------	☐☌² d° p.
29	32.7	25.3	84	68	10	10	------	
30	33.4	25.2	78	70	3	9	------	
Mean	33.1	23.9	91.1	67.1	3.4	4.8	------	
Total	------	------	------	------	------	------	------	

ECHAGUE.

[$\phi = 16°\ 41'$ N; $\lambda = 121°\ 39'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.9	23	97	60	9	9	------	⊕°a. ☿°a.p. ☾°p.
2	36	22.9	97	54	9	3	------	☊² ☌² a. ☐☌ p.
3	35.1	22.7	97	58	6	4	------	☐☌° ☍° p.
4	35.3	22.8	97	60	7	3	------	⊕° a. ◠° ☾° p.
5	35.1	21	93	62	3	4	------	d° ☾° ◠° p.
6	38.5	22.5	97	52	1	1	------	☊² ≡° a. ☾° p.
7	36.5	22.5	91	50	1	1	------	☊² a. ◠° ☾° p.
8	34.8	23.6	99	56	2	8	------	☊² a. ◯° ☐☌° p.
9	35.7	22.4	95	55	1	2	------	◠° ☐☌° p.
10	36.4	22.8	96	55	2	4	------	☊² a. ☾° p.
11	36.1	21.9	91	51	1	3	------	☊² a. ☾° p.
12	35.9	23.4	94	55	10	9	0.6	d ☐☌ a. p.
13	34.3	21.8	96	56	1	4	------	☾° p.
14	34.7	22.7	98	54	2	6	------	☊² ⊕ ◯° a. ☾° p.
15	36	22.3	95	50	1	2	------	☊² a. ☐☌° p.
16	35.1	22.5	94	49	1	6	------	☊² ☿° a. ☐☌° p.
17	33.7	21.6	92	55	5	8	------	☊² a. ◯° a. p.
18	33	21.8	96	56	6	9	------	☿° a.p. d° ☾° ☋° p.
19	35.3	22.1	96	52	7	5	.8	⊕° a. ☐☌² ☍° ☋° p.
20	33.9	22.2	98	53	1	7	5.8	d² a. p. ☿° ☾ ☋° p.
21	30.8	23.2	97	72	10	9	.8	●° ☿° a. ◯° a.p. ☾°
22	34.3	22.1	96	52	3	7	------	☿° ◯° a. ☾° ☋° p.
23	34.4	22.6	97	56	7	7	------	☊² ⊕² ◯° d² ◠° ☾° ☋²
24	34.7	23	96	51	3	10	------	◯° ☿° a. ☿° d° ☾ ☋²
25	35.8	22.8	98	62	6	6	------	≡² a. d° ☿° ☾° p.
26	33.4	22.6	97	67	3	10	7.4	☊² a. ◯° d ☐☌° p.
27	26.8	23	99	92	10	10	6.6	d ●° a. p.
28	29.9	22.7	98	71	10	0	.5	d ◯ a. p. ☾° p.
29	31.9	22.5	95	62	9	6	1	◯° a. p. ☾° d² p.
30	33.6	22.4	97	50	9	3	------	◯° a. ☾° p.
Mean	34.3	22.5	96	57.6	4.9	5.9	------	
Total	------	------	------	------	------	------	23.5	

METEOROLOGICAL DATA, ETC.—Continued.

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	24.9	87	62	8	6	1.3	⊤° p ☾ p.
2	31	25.6	84	69	10	6	5.8	◠° p ☐☾ p.
3	30.8	25	83	68	8	6	------	⊤ ☾ p.
4	31.8	25	80	62	3	2	------	Ω a.
5	31.8	26.5	81	63	0	1	------	Ω a. ⊤° ☾ p.
6	32.2	25.4	80	64	0	0	------	Ω a. ⊤° ☾ p.
7	32.7	26.4	83	66	0	2	8.4	Ω a. ● ☐☾ p.
8	31.9	25.4	81	63	2	5	4.3	○² a. p. p ☐☾° p.
9	31.7	25	82	65	1	1	------	⊤° ☾ p.
10	32.3	27	83	67	3	4	------	Ω a. ⊤° ☾ p.
11	32.4	25.1	81	66	0	3	------	Ω a. ⊤° ☾ p.
12	32.4	25.8	81	62	7	6	------	Ω a. ⊤° p.
13	32.5	25.5	80	63	0	1	------	Ω a. ☐☾ d p.
14	32.7	27	82	66	0	3	2.5	Ω² a. ☐☾ ● ◠° p.
15	32.1	24.6	81	65	0	2	------	⊤° d p.
16	32.1	24.8	82	64	0	4	------	Ω a. ⊤° ◠² d ☾ p.
17	32.6	24.8	82	61	8	5	------	○² a. p. ⊤° d ☾ p.
18	32.6	25.1	79	63	3	4	------	Ω a. ☐☾ ◠° p.
19	33	24.4	82	63	3	2	------	⊤° d ◠° ☾ ☋ p.
20	32.5	24.6	80	60	2	1	------	Ω a. ⊤° ◠° p.
21	31.6	26.1	78	68	10	10	------	Ω a. d ⊤ ☾ ☋° p.
22	32.4	24.5	84	62	1	3	------	Ω a. ⊤° d ◠° p.
23	32.1	26.2	82	68	4	9	26.9	Ω a. ☐☾ ● ☋° p.
24	31.4	24.5	83	69	2	9	------	⊤° d ☋° p.
25	31.2	25	84	71	4	6	4.1	Ω a. ☐☾ p p.
26	31.5	23.9	86	65	3	7	13.5	⊤° ● p.
27	26.9	24.9	85	87	10	10	5.6	●° a. p.
28	30.7	24.4	86	68	10	10	11.4	⊤° ●² p.
29	30.7	24.8	88	72	9	10	25.7	● ☐☾² p.
30	30.6	25.1	87	74	9	9	------	⊤° d ☾ p.
Mean	31.7	25.2	82.6	66.2	4	4.9	------	
Total	------	------	------	------	------	------	109.5	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	23.7	91	69	8	4	2.5	◠ a. ☐☾ ● p.
2	32.7	23	91	62	3	5	5.3	☐☾ ● p.
3	33.4	23.2	92	68	3	5	------	⊤ p.
4	32.8	24.3	95	68	1	2	------	Ω a. ⊤ p.
5	33.2	23.9	93	72	0	7	------	Ω² a. ⊤ p.
6	33.3	24.7	91	66	1	2	------	⊤ p.
7	33	25.1	93	67	0	3	------	Ω° a. ⊤ p.
8	33.5	23.7	97	62	0	5	------	Ω² a. ⊤ ☾ p.
9	32.8	24.2	93	64	0	4	------	Ω² ≡° a. ⊤ ☾ p.
10	34.1	24.7	92	53	0	4	------	Ω ≡° a. ⊤ d ◠ p.
11	34.2	22.9	94	66	0	4	2.8	Ω² ≡° a. ⊤ ● p.
12	33.9	22.7	96	64	0	5	1.8	Ω² ≡° a. ☐☾ ● p.
13	32.9	23	95	64	0	3	------	Ω² ≡° a.
14	34.1	25	89	66	0	5	------	Ω ≡° a. ⊤ p.
15	33.7	24.6	94	64	0	5	1.3	Ω ≡° a. ☐☾ ● p.
16	33.8	24	93	66	0	5	13	Ω ≡° a. ● ☐☾ p.
17	33.7	24.1	92	64	0	4	7.4	Ω² ≡° a. ☐☾ ● p.
18	33.1	23.6	92	71	0	9	5.1	Ω ≡° a. ● ☐☾ p.
19	33.2	23.4	97	71	1	6	32	Ω² ≡° a. ☐☾² ● p.
20	33.4	24.1	96	60	0	3	------	Ω² ≡° a. ⊤ ☋ p.
21	33.3	24	93	72	2	8	14.2	Ω² ≡° a. ● ☐☾ p.
22	32.5	23.3	94	70	0	4	------	Ω² a. ⊤ d ☾ p.
23	34.5	25.2	96	85	0	10	7.6	● ☐☾ ◠² ☋ p.
24	33	23.9	97	60	1	8	2.3	Ω² a. ☐☾ ●° p.
25	33.1	23.4	96	70	0	5	------	Ω² a. ⊤ ☾ p.
26	32.8	23.6	97	73	2	10	6.1	Ω² a. ● ☐☾ p.
27	27.8	24.6	98	96	10	10	9.3	d a. ● a. p.
28	31.3	23.4	97	73	10	10	------	☐☾ d p.
29	32.5	23.3	97	74	8	9	128.3	●² ☐☾² p.
30	32.3	23	97	72	4	6	3.8	☐☾ ● p.
Mean	33	23.9	94.3	68.4	1.8	5.7	------	
Total	------	------	------	------	------	------	242.8	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temparature. Maximum.	Temparature. Minimum.	Relative humidity 6 a. m.	Relative humidity 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	26.2	91	75	10	7	5.1	● a. ☐☾° a. p.
2	31.4	23.8	94	74	4	6	------	☾² Ω p.
3	32.2	25.4	91	76	7	7	------	Ω p.
4	32	25.8	89	79	8	7	------	Ω p.
5	32.3	26.4	83	72	5	5	------	Ω p.
6	32.7	26.9	91	72	8	6	------	Ω p.
7	31.9	26.1	90	75	2	4	------	Ω a. p.
8	31.4	25	94	76	1	3	------	v a. Ω p.
9	31.3	24.5	93	76	1	0	------	Ω p.
10	32.6	25	92	74	1	4	------	Ω° p.
11	31.9	26.8	87	69	2	2	------	v a.
12	31.5	27.1	84	73	1	6	.4	d a. p. ☾° p.
13	31.8	27.3	81	71	2	2	------	☾ p.
14	32.3	27.7	82	72	4	4	------	
15	32.6	27.7	81	66	3	4	------	
16	33	27.6	83	69	1	0	------	v a.
17	32.3	27.7	82	72	6	4	.2	d° a. ☋ p.
18	31.9	26.7	81	67	6	4	.4	v a. d² ◠ p.
19	31.7	27.2	81	67	4	4	------	d° a.
20	31.7	27.1	81	69	4	4	5.1	●° a.
21	32.3	25.7	85	76	5	5	1.3	● a. d² ◠² p.
22	32.3	26.9	85	71	5	6	------	v a.
23	31.8	26.2	85	69	4	4	------	
24	32.3	26.7	86	68	6	5	------	○² Ω p.
25	32.2	25.5	84	68	6	4	1.3	p a. p.
26	31.2	26.2	86	79	7	8	23	d² a. ● p.
27	30.5	24.8	90	77	9	7	2.9	● a. ☾² p.
28	31.4	26	81	72	8	7	------	d² v a.
29	31.4	27.3	81	72	6	3	1.3	● a. ☍° a. p. ☾ p.
30	32	27	81	71	4	4	6	☾ p.
Mean	31.9	26.4	85.8	72.2	4.7	4.5	------	
Total	------	------	------	------	------	------	47	

SEISMOLOGICAL BULLETIN FOR JUNE, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,

Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

3, 4^h 8^m. **Tacloban** (NE of Leyte). Earthquake of intensity II.

7, 20^h 40^m 0^s.* **Southwestern Luzon.** Earthquake of intensity V, which was perceptible in the Provinces of Bataan, Zambales, Tarlac, Nueva Ecija, Pampanga, Bulacan, Rizal, Laguna, Cavite, and Batangas. Its origin seems to have been in the China Sea, very near the southwestern coasts of Luzon, or along these. The meizoseismic area comprised Bataan Province and the western portions of Cavite and Batangas, its major axis being approximately 110 kilometers in length in the direction NNW–SSE, while the minor axis, in the direction WSW–ENE, measured about 40 kilometers. At Manila, which lay at a distance of some 60 kilometers from the epicentral line, only two shocks were registered, having intensity III and the direction SW–NE. These were preceded by vertical movements of intensity II, lasting 4 or 5 seconds. Similar vertical, preliminary movements were observed likewise at several stations within the meizoseismic region. This earthquake has not been registered by any seismograph outside of the Archipelago.

13, 8^h 58^m. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction, SSE–NNW; intensity, III; duration, 4 seconds.

14, 1^h 5^m. **Northeastern Mindanao and eastern Leyte.** Earthquake of intensity III. Its origin lay underneath the sea, north of the small Island of Dinagat. The disturbance must have been likewise perceptible in southern Samar.

15, 5^h 37^m. **Sumay** (Guam, Mariana Islands). Earthquake of intensity III.

15, 21^h 28^m 8^s.* **Leyte Island.** Earthquake of intensity VII at Ormoc and other places to the south thereof, situated on the western coast of the Island. Its origin must doubtlessly be sought to the south or southeast of Ormoc and not far from the coast. The meizoseismic area was limited to a strip of about 20 kilometers in width on the coast of Ormoc Bay. In the interior of the island the disturbance was perceptible only in the north and northeast, with rapidly diminishing intensity as the distance from the coast increased. At 23^h 9^m occurred an aftershock of intensity III, which was perceptible only within the meizoseismic area of the principal quake.

16, 22^h 14^m. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction, SSE–NNW; intensity, III; duration, 8 seconds.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

17, 13h 29m 59s.* **Northern Luzon.** Earthquake of intensity IV in Ilocos Norte, and III in Ilocos Sur and Cagayan. The origin of this earthquake, which latter was felt throughout the part of the island lying north of parallel 17°, appears to have been to the north-northwest of the island, at a considerable distance. At Santo Domingo (Batanes Islands) were felt undulatory movements of intensity III, which were accompanied by subterranean noise, and lasted about 7 seconds.

The disturbance was also felt on board the steamer *Mongolia* which at the time was south of the Pescadores Islands, en route to Manila. From Formosa we have no data whatever; but a comparison of the seismograms traced by the seismographs at Manila, Zikawei, Tsingtau, and Osaka locates the center southwest of the Batanes Islands, near parallel 28° north. The times when the registration of the first (P) and second (S) preliminary movements, respectively, commenced at the observatories mentioned, are the following:

Stations.	P.	S.	S.-P.	Approximate distance of the origin.
	h. m. s.	*h. m. s.*	*m. s.*	*kms.*
Manila	13 29 59	13 31 14	1 15	583
Zikawei	13 30 17	13 31 49	1 32	720
Tsingtau	13 31 24	13 34 12	2 48	1,800
Osaka	13 32 12	13 35 29	3 17	2,300

The three stations, Manila, Tsingtau, and Osaka, agree in placing the center in the region mentioned, in the neighborhood of parallel 20° north, while the times registered by the Zikawei seismograph suppose a much higher latitude of same. This earthquake was likewise registered by several European Observatories.

17, 17h 12m. **Tacloban** (NE of Leyte). Earthquake of intensity II.

18, 2h 41m. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction, E–W; intensity, III; duration, 6 seconds.

26, 23h 18m. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction, SE–NW; intensity, III; duration, 3 seconds.

30, 9h 35m. **Santo Domingo** (Batanes Islands). Earthquake of intensity II.

30, 10h 56m 58s.* **Butuan** (N of Mindanao). Oscillatory earthquake. Direction, SSW–NNE; intensity, IV; duration, 20 seconds. The origin of this earthquake lay probably south of Butuan, in the valley of the Agusan River. According to a communication received from Talacogon, which is situated about 50 kilometers south of Butuan, two or three slight earthquakes per day had been felt in that region on June 26, 27, and 28. These would seem to mark the beginning of a period of seismic activity which, as will be seen, acquired great intensity during the following month of July.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight=0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude. (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
			V.	14 05 25	----------	14 14 08?	14 15 26?	0.01	7.2	14 42	
92	1	I_r	H. NNW	14 05 25	----------	14 14 10?	14 17 10?	.08	9.6	14 40	
			H. WSW	14 05 25	----------	14 14 10?	14 15 32?	.10	7.8	14 40	
			V.	14 58 13?	----------	15 06 18?	15 08 21?	.01	6 4	15 25	
93	1	I_r	H. NNW	14 58 13?	----------	15 06 13?	15 08 12?	.09	9	15 24	
			H. WSW	14 58 13?	----------	15 06 17?	15 08 55?	.04	6.6	15 24	
			V.	2 20 37	----------	2 23 47	2 24 43	.04	2.4	2 42	Vertical component 0.10 mm.
94	2	I_d	H. NNW	2 20 38	----------	2 23 39	2 26 57	.24	9.6	2 39	
			H. WSW	2 20 38	----------	2 23 35	2 25 41	.14	9	2 39	
			V.	6 53 52	----------	----------	----------	----------	----------	7 06	
95	4	I	H. WSW	6 53 53	----------	----------	----------	----------	----------	7 06	
			V.	5 34 20	----------	----------	----------	----------	----------	5 49	
96	6	I	H. WSW	5 34 20	----------	----------	----------	----------	----------	5 49	
97	6	I_d	V.	20 10 31	----------	20 11 17	20 11 33	.31	2.4	20 22	V. C. 0.08 mm.
			V.	20 40 00	----------	20 40 12	20 42 25	1.90	2.4	20 55	V. C. 2.88 mm. Earthquake, V in
98	7	II_d	H. NNW	20 40 00	----------	20 40 14	20 43 18	.23	4.5	20 52	the southwest of Luzon.
			H. WSW	20 40 00	----------	20 40 13	20 42 38	.29	6.6	20 53	
			V.	19 53 25	----------	----------	----------	----------	----------	20 20	V. C. 0.01 mm.
99	9	I_r	H. NNW	19 53 25	----------	----------	----------	----------	----------	20 39	
			H. WSW	19 53 25	----------	----------	----------	----------	----------	20 29	
			V.	21 28 08	----------	21 29 18	21 29 30	.05	2.4	21 41	Earthquake, VII in Leyte Island.
100	15	I_v	H. NNW	21 28 08	----------	21 29 18	21 30 18	.11	10.4	21 44	
			V.	14 40 24	----------	----------	----------	----------	----------	16 57	V. C. 0.01 mm.
101	16	II	H. NNW	14 40 26	----------	----------	----------	----------	----------	16 56	
			H. WSW	14 40 26	----------	----------	----------	----------	----------	16 42	
			V.	13 29 56	----------	13 31 12	13 32 25	1.72	2.4	14 36	V. C. 0.09 mm. Earthquake, IV in
102	17	II_v	H. NNW	13 29 59	----------	13 31 14	13 32 26	1.77	11.7	14 50	the north of Luzon.
			H. WSW	13 29 59	----------	13 31 14	13 34 07	2.73	9.6	14 42	
103	20	I_d	V.	15 57 36	----------	15 58 04	15 58 50	.06	2.4	16 03	V. C. 0.01 mm.
			V.	15 49 15	----------	15 52 00	----------	----------	----------	16 03	
104	21	I_r	H. NNW	15 49 16	----------	15 52 01	15 53 06	.11	9.6	16 08	
			H. WSW	15 49 16	----------	15 52 04	15 52 31	.04	4.8	16 06	
105	22	I_d	V.	----------	----------	22 55 44	22 56 19	.01	2.4	23 00	
106	23	I	V.	10 52 19	----------	10 53 29	10 54 33	.05	2.4	11 13	V. C. 0.01 mm.
			V.	10 30 07	----------	----------	----------	----------	----------	10 49	V. C. 0.01 mm.
107	24	I	H. NNW	10 30 08	----------	----------	----------	----------	----------	10 56	
			H. WSW	10 30 08	----------	----------	----------	----------	----------	10 52	
108	24	I_d	V.	----------	----------	13 03 26	13 03 28	.06	2.4	13 06	V. C. 0.02 mm.
109	25	I_d	V.	6 08 45	----------	6 09 01	6 09 05	.01	2.4	6 12	V. C. 0.01 mm.
			V.	18 56 58	----------	----------	----------	----------	----------	20 32	
110	29	I_u	H. NNW	18 56 58	19 04 16	19 13 28	19 15 13	.07	10.8	20 22	
			H. WSW	18 56 58	----------	----------	----------	----------	----------	20 15	
			V.	2 12 37	----------	2 16 43	2 18 35	.01	4.8	2 35	V. C. 0.01 mm.
111	30	I_r	H. NNW	2 12 38	----------	2 16 44	2 17 22	.27	10.5	2 40	
			H. WSW	2 12 38	----------	2 16 44	2 18 45	.07	6.6	2 37	
			V.	10 56 58	----------	11 00 32	11 01 48	.07	2.4	11 58	Earthquake, IV at Butuan (N of
112	30	II_v	H. NNW	10 56 57	----------	10 59 32	11 04 51	.77	10.8	12 16	Mindanao).
			H. WSW	10 56 57	----------	10 59 33	11 01 25	.53	9.6	12 06	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

3, 4h 08m. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad II.

7, 20h 40m 00s.* **SW de Luzón.** Temblor de tierra de intensidad V, perceptible en las Provincias de Zambales, Tárlac, Bataan, Pampanga, Nueva Écija, Bulacán, Rizal, Laguna, Cavite y Batangas. El origen parece se hallaba en el mar de la China muy cerca de las costas SW de Luzón ó tal vez á lo largo de las mismas; el área meizoséismica comprendió la Provincia de Bataan y la parte occidental de las Provincias de Cavite y Batangas, abarcando una extensión de unos 110 kilómetros de longitud en la dirección NNW–SSE y unos 40 kilómetros en la dirección WSW–ENE. En Manila, distante unos 60 kilómetros de línea epicentral solamente se registraron dos choques de intensidad III y dirección SW–NE, precedidos de movimientos verticales de intensidad II durante 4 ó 5 segundos. Semejantes movimientos verticales preliminares se observaron también en algunas estaciones de la región meizoséismica. No fué registrado este temblor por ningún seismógrafo de fuera del Archipiélago.

13, 8h 58m. **Tacloban** (NE de Leyte). Temblor oscilatorio, dirección SSE–NNW, intensidad III, duración 4 segundos.

14, 1h 05m. **NE de Mindanao y E de Leyte.** Temblor de tierra de intensidad III. Su origen se hallaba en el mar al N de la pequeña Isla Dinagat; debió ser también perceptible en la parte S de la Isla de Sámar.

15, 5h 37m. **Sumay** (Isla de Guam, Marianas). Temblor de tierra de intensidad III.

15, 21h 28m 08s.* **Isla de Leyte.** Temblor de tierra de intensidad VII en Ormoc y otros pueblos del Sur de Ormoc situados en la misma costa occidental de la Isla. El origen de este temblor se hallaba sin duda hacia el S ó SE de Ormoc y á poca distancia de la costa. El área meizoséismica se limitó á una faja de unos 20 kilómetros de extensión en la costa de la bahía ó seno de Ormoc. En el interior de la Isla solamente fué perceptible en la parte N y NE pero con intensidad rápidamente decreciente á partir de la costa. Á 23h 09m hubo una réplica ó aftershock de intensidad III, perceptible solamente dentro del área meizoséismica del temblor principal.

16, 22h 14m. **Butúan** (N de Mindanao). Temblor oscilatorio, dirección SSE–NNW, intensidad III, duración 8 segundos.

17, 13h 29m 59s.* **N de Luzón.** Temblor de tierra de intensidad IV en Ilocos Norte y de intensidad III en Ilocos Sur y Cagayán. El origen de este temblor, que fué perceptible en toda la parte N de Luzón hasta el paralelo 17°, parece se hallaba algo distante hacia el NNW de la Isla. En Santo Domingo (Islas Batanes) se sintieron movimientos ondulatorios de intensidad III, acompañados de ruído subterráneo, que duraron unos 7 segundos.

También lo sintió el vapor *Mongolia* mientras navegaba al S de las Islas Pescadores, en viaje hacia Manila. No poseemos noticia alguna de Formosa, más comparando los registros de los seismógrafos de Manila, Zikawei, Tsingtau y Osaka el origen debe colocarse hacia el SW de Islas Batanes cerca del paralelo 20° N. Las horas en que comenzaron á registrarse los primeros y segundos movimientos precursores en los citados observatorios son las siguientes:

Estaciones.	P.	S.	S.-P.	Distancia aproximada del origen.
	h. m. s.	*h. m. s.*	*m. s.*	*kms.*
Manila	13 29 59	13 31 14	1 15	583
Zikawei	13 30 17	13 31 49	1 32	720
Tsingtau	13 31 24	13 34 12	2 48	1,800
Osaka	13 32 12	13 35 29	3 17	2,300

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el meridiano 120° E de Greenwich.

Las tres estaciones, Manila, Tsingtau y Osaka, concuerdan en situar el origen hacia la región antes señalada cerca del paralelo 20° N, mientras que las horas de Zikawei lo suponen mucho más al N. Este temblor fué registrado en algunos observatorios de Europa.

17, 17^h 12^m. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad II.

18, 2^h 41^m. **Tacloban** (NE de Leyte). Temblor oscilatorio, dirección E–W, intensidad III, duración 6 segundos.

26, 23^h 18^m. **Tacloban** (NE de Leyte). Temblor oscilatorio, dirección SE–NW, intensidad III, duración 3 segundos.

30, 9^h 35^m. **Santo Domingo** (Islas Batanes). Temblor de tierra de intensidad II.

30, 10^h 56^m 58^s.* **Butúan** (N de Mindanao). Temblor oscilatorio, dirección SSW–NNE, intensidad IV, duración 20 segundos. El origen de este temblor se hallaba probablemente al S de Butúan en el valle del Río Agusan donde, según una nota remitida de Talacogon, que está á unos 50 kilómetros más al S, los días precedentes 26, 27 y 28 se sintieron dos ó tres temblores de tierra diarios aunque de poca intensidad: probablemente estos temblores representan el principio de un período séismico que adquirió, como se verá, gran importancia en el siguiente mes de Julio.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

PRELIMINARY NOTES ON SUBTERRANEAN OR SEISMIC NOISES.

By. Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

Introduction.—In every latitude of the globe are found certain regions within which strange noises are heard with greater or less frequency. The most strange and entirely disproportionate causes are usually assigned by the inhabitants of these regions as being responsible for these sounds. They are, however, universally known as "subterranean" or "seismic noises," though in most cases, and precisely in the regions in which they are heard most frequently, they neither precede, nor accompany, nor follow any perceptible seismic movement.

In order to ascertain to which extent such noises occur in the Philippine Archipelago, a circular was issued to the observers of the Weather Bureau in November, 1909, in which they were requested to obtain from educated persons within their respective provinces information concerning the following questions:

1. Has the local dialect any special word for designating the noises or sounds which are heard occasionally, either in connection with earthquakes, or without such? These sounds may resemble the far-off roar of cannons; the firing of a blast, or other detonations heard at a distance; prolonged and muffled thunder; the rumblings of a railway train when at some distance or while passing through a tunnel; the crash of a collapsing building, or that produced by a mass of wood, stones, etc., which are being dumped off a vehicle at a distance; they may also resemble the roar of a distant surf, of a mighty waterfall, etc.

2. In case such noises are heard, do they occur only when there are earthquakes, or also on days which are free from seismic disturbances?

3. From which direction do they seem to come? From the mountains or the plains or the sea? From north or south, etc.?

4. During what kind of weather are they heard more frequently? During rainy or clear, during stormy or calm weather? During the months of greatest heat or the cool ones? During the wet or dry season?

5. During which hours of the day are they more frequent? In the morning, forenoon, afternoon, or night?

6. Where do—according to popular opinion—these sounds originate? In the clouds or below the earth? The mountains or the sea?

7. Do you know, or have you heard, that in some other locality, for instance, in the mountains, or some place far from your town such noises are being heard?

In the following brief notes we have embodied the more complete replies which we have received thus far, but beg to add that, although our informants merit full confidence, we do not assume any responsibility for the accuracy of their statements.

In order that the present paper may serve as a guide for the observers of the Weather Bureau and others, who desire to contribute to a further study of this class of phenomena, we preface it by some general remarks concerning the designation and the classes of causes of these noises.

Variety of designations.—As these sounds have been known from the remotest times, they have received different names in different parts of the globe which, however, usually express more or less clearly either the cause to which the people attributed them, or the atmospheric conditions during which they are perceived more clearly or more frequently. Thus, along the foggy coasts of the North Sea (Europe), they are called "Mistpoeffers" and "Mistbommen" (fog guns). In Italy, they have received the names "Brontidi, Bonniti, Marina, Mugghio de la Balsa, Trabuso," etc., accordingly as the people of the different provinces attribute them to far-off thunderstorms, to the waves of the sea or of certain lakes, or to subterranean explosions and detonations. In India they are known under the name of "barrisal guns," since the populace believes them to be mysterious salutes fired in honor of the holy men buried in the city of Barrisal. On the Hiberian Peninsula and in the South American republics they are called "Retumbos" (rumblings) or "Bramidos" (roarings), accordingly as they are believed to originate below or on the surface of the earth. In the Philippines, several dialects have words to designate these sounds, but most of these have only the general signification "rumbling" or "noise," and only a few indicate whether the latter are supposed to proceed from the sea, or the mountains or the clouds.

Davison's scale.—As these sounds vary greatly in tonality from a sharp report to a muffled rumbling, Prof. Charles Davison reduced them to seven groups, corresponding to different natural and artificial kinds of noises which are heard most frequently, and thus formed the following scale, which has been adopted by the last International Seismological Congress (Hague, 1907) under the name of "Davison's Scale."[1]

I. A sound such as produced by heavy wagons, or by a train passing through a tunnel or over an iron bridge.

II. A loud clap or heavy peal of thunder, sometimes dull, muffled, or subdued, but most frequently like distant thunder. A low, deep sound.

III. A moaning, roaring, or rough strong wind; the howling of wind in a chimney.

IV. A noise like that produced by a falling wall or roof, or by the dumping of a large load of bricks or stones.

V. The fall of heavy bodies (large trees, beams, an avalanche), the banging of doors.

VI. The explosion of a boiler or dynamite cartridge; distant heavy rock blasting and the boom of distant cannons.

VII. Sounds of a miscellaneous character, such as the trampling of many men or animals, the roar of a waterfall or of distant waves, the clatter of rain or hail when the storm approaches, and the rending and subsequent settling together of huge masses of rock.

Causes of seismic noises.—Professor Davison has set himself the task of introducing as much uniformity as the subject permits, into the observations which are being made in different parts of the globe, in order to facilitate the investigation into the true causes of the so-called "seismic sounds," an investigation which thus far has failed to give decisive results. Many writers of repute who have written on the subject, exclude every cause outside of the earth's crust, and maintain that these noises must be ascribed exclusively to the same subterranean factors which produce earthquakes, that is, to geological or volcanic causes. They assert that the noises are a seismic phenomenon, an abortive, or rather stifled earthquake, in which the vibrations of the earth are changed into more or less perceptible sounds. Others, on the contrary, hold that also other causes must be admitted, for instance, the ocean waves, the wind, and other atmospheric elements. Popular beliefs favor these latter considerably more than the former, as is shown by the names given to these phenomena. Thus "Mistpoeffers" and "Mistbommen" indicate that fog, or rather the atmospheric conditions usually accompanying same, are considered responsible for the noise. Similarly called "Marina" and "Mugghio de la Balsa" attribute the sounds respectively to the sea, and to the wind in the gorges. The Visayan word "Canug-cug" signifies likewise a noise in the depths of the sea.

[1] "A Study of Recent Earthquakes. By Charles Davison" (pp. 230 and 231). Interrogatory of the Bureau Central de l'Association Internationale de Sismologie (Reply Postal Card).

OBSERVATIONS.

In the following table we have united the replies to our circular mentioned in the introduction, taking from them only those points which bear directly upon the existence and qualities of the phenomenon. The columns of this table conform almost exactly to the interrogatory sent out by the Central Bureau of the International Seismological Association. It is hoped that at some future time we will be able to publish more numerous and more precise data. In the meanwhile, these preliminary notes may serve to encourage the observers of the Weather Bureau and other persons who read these lines to persevere in the observation of these phenomena. The accompanying map shows the boundaries of the various provinces which are mentioned in the table.

Place.	Province.	Location.	Hours during which heard.	Degrees of Davison's scale.	Direction from which they come.	Origin.	Prevailing weather.	Cause.	Connection with earthquakes.	Remarks.
Laoag	Ilocos Norte	W coast		II	NE	Mountains	Hot, clear and calm.	Heat and evaporation.	With and without earthquakes.	
Piddig	do	On first spurs of the Central Cordillera.		II	E	do		Unknown		
Aparri	Cagayan	Banks of Cagayan River.			E	do		do		Heard very seldom.
Tuguegarao	do	Banks of Cagayan River, far from the sea.		II	E, S			do	Withand without earthquakes.	
Peñablanca	do	E Cagayan River Valley.	At nightfall	II	E	Mountains		do	do	Before a typhoon.
Ilagan	Isabela	S Cagayan River Valley.	Evening and night.	II	N, S	Plains	Hot, dry and clear.	do	Without earthquakes.	
Vigan	Ilocos Sur	W coast								Negative answer.
Candon	do	do								Do.
San Fernando	Union	do								Do.
Baguio	Benguet	1,445 meters above sea level.								
Bolinao	Pangasinan	N coast, near Cape Bolinao.		VI	SE	Small islands	Hot, clear, with SE wind.	Waves in caverns	Without earthquakes.	Cause believed to be waves produced by SE and N winds, which penetrate into the caverns and passages of the so-called "Cien Islas."
Alaminos	do	Undulating ground		II	E, S, SE	do	With northwinds	do	do	
San Manuel	do	N of plains of Pangasinan.		II	SE	Plains		Unknown	With earthquakes.	
San Quintin	do	do	During daytime.	II	S	Clouds		do	Without earthquakes.	
Santa Maria	do	do	At nightfall	II	E	Mountains	Rainy	do	With earthquakes.	
Anda	do	Islet in gulf	Night	II	NW, NE	Sea	Hot and rainy season.	Waves beating against rocks.	Without earthquakes.	In May and June they are heard from NW in November and December, from NE.
Asingan	do	N of plains of Pangasinan.	do	II	N, S	Clouds	Rainy and calm	Unknown		
Villasis	do	Center of plains	do	II	N, NW	Sea	Rainy	Ocean waves	Without earthquakes.	
San Jacinto	do	N of plains of Pangasinan.		II	NW	Mountains	do	Unknown	do	
Lingayen	do	W coast	After midnight	II	NE	do	do	do	do	
San Isidro	Nueva Ecija	High plains	Night	V	S	Plains	do	do	do	
Tarlac	Tarlac	Plain, interior								Negative answer. Throughout the province are known the sounds called "Timalan" which are produced at a place of the same name. They indicate a change of weather from fair to bad or vice versa. If heard during a typhoon, the latter will cease soon.
Silang	Cavite	High ground, volcanic tuff.	After midnight	II	NW	Sea	Rainy	Ocean waves	Without earthquakes.	
Imus	do	Lowland, tuffs	Night	II	W	do	do	do	do	

Batangas	Batangas	S coast	Evening and night.	VII	NE, SW	Mountains and sea.	Dry and hot		do	Noises from SW indicate change of weather; they come from the sea.
Atimonan	Tayabas	N coast	Night and morning.	VI	SE	Mountains		Unknown	do	Indicate change of weather: precede a typhoon.
Lopez	do	NW coast	Night	II	E	do	Clear and hot	do	do	Occasionally degree VI with earthquake.
Tayabas	do	High on Mount Banahao, volcanic.		VII			do	do	do	Indicate change of weather.
Nueva Caceres	Camarines	Alluvial soil, far from the sea.	Morning and night.	VII			do	do	do	
Legaspi	Albay	E coast		II	NW	Volcano	Clear, hot and calm.	Mayon Volcano?	do	Noises of degree V are sometimes heard coming from the sea: a sure sign of change in weather.
Guinobatan	do	Near Mayon Volcano	Early morning	VI	SW	do	Clear and hot	do	do	
Virac	Catanduanes Islands.	S coast		II	S, E	Volcano and sea.	Cloudy	Unknown	do	The noise from S is believed to come from Mayon Volcano.
Romblon	Romblon Island	Small island								
Cebu	Cebu	E coast	Night	III, VI	NW, S	Mountains and sea.		Unknown	Without earthquakes.	Negative answer.
Laoang	Samar	N coast	do	II	S	Mountains	Clear and dry	Subterranean	With and without earthquakes.	
Borongan	do	E coast	Early morning	II	N	Coast	Rainy	do	do	
do	do	do	do	VI	NE	Sea	do	Waves dashing against the coast and in the depths of the sea.	Without earthquakes.	If heard in November, December, and January, they announce with certainty a typhoon in the Pacific Ocean.
Tacloban	Leyte	NE coast								
Burauen	do	Mountainous country	Night	II	SW	Volcano	Rainy	Some active solfataras?	With and without earthquakes.	Negative answer.
Ormoc	do	W coast	Evening and night.	II	NE	Mountains	Hot and dry	Subterranean	do	
Maasin	do									Do.
Guimbal	Iloilo									Do.
Iloilo	do									Do.
Antique	Antique									Do.
Surigao	Surigao									Do.
Dapitan	Misamis	NW coast		II	SE	Mountains	Hot and dry	Unknown	Without earthquakes.	
Butuan	Agusan	Alluvium, Agusan River.	Night and early morning.	VI	SE, SW	do	Hot, dry, and calm.	do	Without earthquakes.	When heard during rain they indicate that it will cease; similarly when heard from NW during heavy wind, the latter will abate soon.
Zamboanga	Moro Province	S coast	Night	II	NE	do		Unknown	Without earthquakes.	
Isabela	Basilan Island	N coast								
Cotabato	Moro Province	On Cotabato River	Early morning and nightfall.	II	E, W	Mountains and sea.	Hot	Subterranean	With and without earthquakes.	Negative answer.
Davao	do	SE coast	Night	II	E	Sea				
Jolo	Sulu Island	N coast		VI	SE, SSW	Mountains	Hot and calm	do	do	
Cagayan	Cagayan Island	S coast		VII	S	Coast	Hot and dry	Waves in caverns	With earthquakes. Without earthquakes.	During April and May.

We call attention to the fact that of the 53 places which figure in the foregoing table, 30 are situated on the seacoast, while the rest may be considered as towns in the interior, though, owing to the elongated form of most of the islands, only two of these towns, San Isidro and Tarlac, are more than 50 kilometers from the nearest points of the coast. Most of the 30 seacoast towns either lie along the coasts of the interisland seas, or on more or less inclosed bays, or they have small islands lying off their shores; only very few are situated on an entirely open coast. Of the latter, Vigan, Candon, and San Fernando (Union) face the China Sea; Borongan, the Pacific Ocean; Jolo, Antique, and Cagayan, the Sulu Sea. The 13 stations which sent negative replies are scattered throughout the Archipelago, 4 being in the northwestern part of Luzon, the rest in the Visayan Islands and Mindanao.

GENERAL RESULTS OF THE INVESTIGATION.

Time of occurrence and kind of noise.—In the majority of cases, the time when the noises are heard most frequently is at nightfall, during the night, and in the early morning. Among the 26 places for which the time of the noises is stated definitely, only one reports their occurrence during daytime.

The kind of noises reported most frequently, in fact, 27 times out of 39, is that which corresponds to number II of Davison's scale; number VI will be found assigned seven times, number VII five times.

Direction.—The direction from which the sounds appear to come is, with rare exceptions, that of the mountains, or inland. There are very few coast towns which hear the noise to seaward; while, on the contrary, several inland towns hear them in the direction of the sea.

Season of greatest frequency.—The time of the year during which these noises are heard most frequently, is the hot season, March, April, and May, especially during calm weather with a clear sky. In the towns of Pangasinan Province, however, they are heard—almost without exception—during the rainy season. Something similar occurs in Borongan, situated on the Pacific coast, where they are heard, however, not only from June to October, but likewise during November, December, and January.

Probable causes of these noises.—To the question regarding the cause—true, or apparent—of these noises, most of our informants reply that it is unknown; a number of them opine, however, that it is subterranean. Eight correspondents, residing in the Provinces of Cagayan, Pangasinan, Cavite, Batangas, Albay, and Agusan and, hence, in widely different parts of the Archipelago, assure us that, in their town or province, the noises are connected intimately with changes in the weather, generally with impending typhoons. In this case, the majority attributes them to the waves of the sea. Thus in Cagayan Province, the noises which herald a typhoon are ascribed to the waves of the Pacific Ocean lashing the steep eastern coast of Luzon, which are at a distance of 40 to 50 kilometers from the towns of our informants, situated in the Cagayan Valley. A low mountain range separates the valley from the sea. The people living west of the Lingayen Gulf believe that the noises are produced among a series of small islands and rocks, called "Cien Islas" (Hundred Islands), which lie close to the western shore of the gulf and form a chain about 4 or 5 kilometers long. These are formed by cavernous limestone, and it is believed that the sound is caused by the ocean waves which at the time of southeasterly and northeasterly winds rush into the numerous caves and canals of the locality. In Cavite Province, the noises known by the name "Timalan" announce an impending change of weather—they indicate rainy weather if heard during fair weather, and, vice versa, clear weather if they occur during stormy weather. The local name "Timalan" is in reality that of a hamlet and creek, which latter empties into the southern part of Manila Bay. The belief is general that the sounds in question are produced by waves which enter the mouth of the creek. The noise is perceptible throughout the province, even at distances of 30 kilometers from the place called "Timalan." The inhabitants of Batangas Province hold likewise that the noises which indicate a change of weather are due to the sea, as they are heard in the southwest, in the direction of the entrance to the narrow strait which separates Luzon and Mindoro Islands. The sounds which

on the eastern coast of Samar are said to announce the approach of a typhoon from the Pacific Ocean, proceed from certain headlands and cliffs along the coast and are credited to the waves raised by the storm. In Butuan, Agusan River Valley, the sounds are likewise attributed to the waves of the Pacific rushing through the various narrow channels within Butuan Bay, whenever they are heard coming from northeast, in which case they predict a change of weather. Finally, our informant at Cagayan, a small island situated in the southwestern part of the Sulu Sea and only about 80 kilometers from the northernmost point of Borneo, assures us that the sounds audible in the southern portion of his island during April and May, at which time the southeast winds prevail, are the effect of the waves which penetrate into certain subterranean passages existing in the neighborhood, whose entrances are visible at low tide. These galleries are many meters long and extend as far as underneath the neighboring hills.

The instances in which the sounds perceived show any connection with earthquakes are few, and our correspondents distinguish usually between the noises heard frequently and the low rumblings which occasionally precede earthquakes. As to the latter, they believe them to be produced by the movements of trees and buildings.

It would appear that in concluding these notes I ought give my own opinion regarding the origin of at least some of the noises which form the subject of this paper. In view of the immense cyclonic swell which many of the typhoons originating in the Pacific Ocean produce, not only on the eastern coasts of Mindanao, Samar, and Luzon, but likewise in some of the inter-island seas and channels, I am inclined to admit that, at least in those cases in which there seems to exist a real connection between the sounds and a subsequent change in the weather, the sounds are due to the ocean swell lashing certain steep and cavernous shores. It is a well-known fact that the typhoons of the Pacific occasionally cause exceptionally heavy swells, which are propogated over more than 1,000 kilometers and, hence, arrive on our shores days before the weather becomes threatening and the wind acquires any appreciable force.

On the other hand, during the dry and hot months which favor the occurrence of these sounds, that is, during March, April, and May, the prevailing southeast winds produce a movement of the sea which is very noisy when it strikes the coast, but almost imperceptible at a distance of a few meters from the shore. Of this phenomenon we have personal experience as regards the beach south of Manila. Though this is sandy and very flat, the sea breaks over it during the months mentioned with a noise which can be heard distinctly at the Observatory, while usually nothing is heard during the other months, although the SW wind and sea be heavier. Can not the same thing that happens near Manila on a sandy and level beach, take place likewise on other steep and rocky coasts, and instead of the low rumbling heard from the Observatory, produce a roar and detonations? May it not be that the noise produced by the sea is heard at great distances, and occasionally even louder than near the coast, owing to special atmospheric conditions, and possibly to interference and reflection? Is it not possible that the nearly-by mountains, crowned with seething cumulus clouds, reflect the sounds coming from the sea, in such manner that they appear to come from the mountains, as is the case in many towns mentioned in the table? Thus, in the spacious garden of the Observatory there are often heard at nightfall the bells of a church which is approximately 1 kilometer south of it. But, owing no doubt to the garden wall, the heavy foliage of trees, and a large building, which intervene toward the south, the sounds are perceived as coming from the east-northeast, since only those sound waves reach the ear which have been reflected by several buildings and a number of large trees which stand in the latter direction at a distance of about 200 meters. Certainly, no one ignorant of the facts in the case would suspect that the source of the sounds is south of the place and not to the east-northeast. This and similar instances which could be adduced lead me to suspect that in many towns situated close to the seashore, but shut off from its view by a wall of vegetation or slight elevations of the intervening ground, the noise produced by the waves is heard only by reflection from the neighboring mountains. As nearly all the islands of the Philippine Archipelago are relatively narrow and mountainous and, consequently, the coastal plains reduced to

narrow strips, very many towns are in situations such as described. The fact that the sounds are heard almost exclusively at nightfall, during the night, and in the early morning, does not militate against this explanation: it suffices to call attention to the circumstance that the hours during which they are perceived most readily are simply those during which there usually prevails greater stillness and people have their attention less occupied by other things.

I hope that further observations will throw more light on this matter. In the meanwhile, all observers of the Weather Bureau will make themselves familiar with the present state of the question by a careful perusal of these notes and will continue to make investigations which may be useful in resolving the problem. All readers of the MONTHLY BULLETIN are likewise invited most cordially to coöperate by communicating to this Office whatever they may observe concerning these phenomena.

BREVES NOTAS SOBRE LOS RUIDOS SUBTERRÁNEOS Ó SÉISMICOS.

Introducción.—En todas las latitudes del globo existen ciertas regiones donde se oyen con más ó menos frecuencia ruidos extraños, que el vulgo suele atribuir á las más raras y desproporcionadas cuasas. Semejantes ruidos se designan con el nombre general de "ruidos subterráneos ó séismicos," por más que en la mayoría de los casos y donde con más frecuencia se oyen, ni preceden, ni coinciden, ni siguen á ningún movimiento séismico perceptible. Á fin de investigar si en el Archipiélago Filipino existen tales ruidos, en Noviembre de 1909 se envió á los observadores del Weather Bureau una circular, en la que se les recomendaba procurasen obtener de las personas ilustradas de la provincia respectiva, información acerca de las siguientes cuestiones:

1.° Si existe algún vocablo en la lengua local para expresar los ruidos ó retumbos que á veces se oyen, juntamente con temblor de tierra ó sin temblor de tierra. Tales ruidos pueden ser semejantes á cañonazos lejanos, á descargas de barrenos ú otras detonaciones lejanas; á truenos largos y sordos; al ruido del tren, oído desde lejos y cuando pasa por un túnel; al que haría la caída de una casa ó al descargar ó echar al suelo repentinamente una gran cantidad de madera, piedras, etc., si se oyese de algo lejos: al de olas del mar oídas de lejos, al de un gran salto de agua, etc.

2.° Si se suelen oir á veces tales ruidos: si se oyen sólo cuando hay temblor ó también en otros días sin temblor de tierra.

3.° Hacia dónde se oyen; si hacia los montes ó hacia los llanos, hacia el mar etc.; hacia el norte ó hacia el sur, etc.

4.° Con qué tiempo se oyen más; si con tiempo lluvioso, ó claro, si con viento ó con calma, etc.: si en los meses de más calor ó en los frescos; si en tiempo de aguas ó en tiempo de secas.

5.° En qué horas del día se oyen más: si por la mañana ó durante el día, por la tarde ó por la noche.

6.° De dónde cree la gente que provienen; si de las nubes; ó debajo de la tierra; de los montes ó del mar.

7.° Si alguien sabe ó ha oído decir que en otra parte, en algunos montes ó sitios lejanos del pueblo, se oyen tales ruidos.

En estas breves notas resumiremos las respuestas más completas que hasta la fecha hemos recibido; haciendo constar que aunque los informantes nos merecen toda confianza descargamos, sin embargo, en ellos la responsabilidad de sus afirmaciones.

Mas, á fin de que estas mismas notas sirvan de guía á los observadores del Weather Bureau y á otras personas que deseen continuar contribuyendo al estudio de esta clase de fenómenos, añadiremos antes algunas nociones generales sobre los diversos nombres, clases y la causa de tales ruidos.

Diversidad de nombres.—Como tales ruidos se conocen desde la más remota antigüedad han recibido en las diversas regiones del globo distintos nombres que expresan más ó menos la causa á que el vulgo los atribuye, ó bien las condiciones atmosféricas en que más fácil y frecuentemente se oyen. Así en las neblinosas costas del mar del Norte de Europa se llaman "Mistpoeffers" y "Mistbommen" (ruídos de la niebla); en Italia se les dan los nombres de "Brontidi, Bonniti, Marina, Mugghio de la Balsa, Trabuso, etc.," según que en las diversas provincias los atribuyen á tormentas lejanas, á las olas del mar y de algunos lagos, ó bien á explosiones y detonaciones subterráneas: en la India, se conocen con el nombre de "Barrisal guns," por creer el vulgo que son salvas misteriosas hechas á los santones enterrados en la ciudad de Barrisal: en la Península Ibérica y en las repúblicas sud-americanas se les da el de "Retumbos" y "Bramidos," según se consideren procedentes de debajo de la tierra ó de la superficie. En Filipinas existen también varios vocablos correspondientes á los diferentes dialectos, pero los más de ellos son nombres que significan en general "retumbos ó ruidos," distinguiendo solamente algunos, si tales ruidos proceden del mar, de las montañas ó de las nubes.

Escala de Davison.—Siendo estos ruidos muy variados en su tonalidad, desde el estampido agudo hasta el rumor sordo, el Prof. Davison los redujo á siete grupos correspondientes á los diversos ruidos naturales y artificiales que más frecuentemente se oyen, formando así la siguiente escala, adoptada por el último Congreso Internacional de Seismología con el nombre de "Escala de Davison."

I. Ruido producido por el paso de carros ó de un tren por dentro de un túnel ó sobre un puente de hierro.

II. Retumbo del trueno; detonación sorda, prolongada, amortiguada, frecuentemente lajana, como un ruido bajo y profundo.

III. Mujido ó bramido del viento impetuoso; el rugido ó silvido del viento en una chimenea.

IV. Ruído que produce la caída de un muro, ó de un edificio; ó la descarga en masa de un gran vagón de ladrillos ó de piedras.

V. Caída de cuerpos pesados (árboles grandes, vigas, aludes, golpes de grandes puertas).

VI. Explosión de una caldera, de un cartucho de dinamita, de un cañón; repercusión ó eco lejano de los cañonazos.

VII. Ruido sordo que produce la caballería, una cascada, las olas del mar oídas desde algo lejos: ruido de la lluvia y del pedrisco cuando se acerca la tormenta; el de enormes masas de roca que se desprenden de los montes y se desmenuzan.

Causas de los ruídos.—El Prof. Davison se propuso uniformar, en cuanto cabe, las observaciones hechas en diversas regiones del globo á fin de hacer más fácil la investigación de las verdaderas causas de tales ruidos. No se ha llegado todavía en esta parte á resultados decisivos: muchos escritores respetables que se han ocupado en investigarlas excluyen toda causa exógena, ó sea exterior á la corteza terrestre, y pretenden que se atribuyan á las mismas causas endógenas, subterráneas, ya sean geológicas ya volcánicas de los terremotos. Tales escritores sostienen que el ruído es un séismo, un terremoto, abortado ó bien amortiguado, en el que las vibraciones terrestres se traducen en sonidos más ó menos audibles. Otros, por el contrario, creen que se deben admitir también causas exógenas, ya sean las olas del mar, ya el viento ú otros elementos atmosféricos. Las creencias populares están más del lado de estos últimos que de los primeros, como lo indican los mismos nombres vulgares: así, por ejemplo, "Mistpoeffers" significa "ruidos de la niebla," como si ésta ó más bien las condiciones atmosféricas que la suelen acompañar fuese la causa de ellos; del mismo modo "Marina" y "Mugghio de la Balsa" significan ruidos del mar ó del viento en los barrancos así llamados: el vocablo visaya "Canug-cug" significa también ruido del fondo del mar.

OBSERVACIONES.

En el siguiente cuadro hemos resumido las respuestas antes mencionadas tomando de ellas sólo lo que directamente se refiere á la existencia y otras cualidades del fenómeno. Las diferentes secciones del cuadro corresponden casi del todo á las del cuestionario repartido por el Bureau Central de l'Association International de Sismologie. Esperamos que más tarde se podrán publicar datos más numerosos y precisos: esta nota preliminar podrá mientras tanto fomentar la constancia en la observación de estos fenómenos tanto de los observadores del Weather Bureau como de otras personas que lean estas líneas. Acompaña á estas notas un mapa del Archipiélago donde están indicados los límites de las diversas provincias mencionadas en el cuadro.

Lugar.	Provincia.	Situación.	Horas en que se oyen.	Grados de la Escala Davison.	Dirección de donde vienen.	Origen.	Tiempo reinante.	Causa.	Relación con los temblores.	Notas.
Laoag	Ilocos Norte	Costa, W		II	NE	Montañas	Caluroso, claro y calmoso.	Calor y evaporación.	A veces con, á veces sin temblor.	
Piddig	id	En los primeros estribos de la Cordillera Central.		II	E	id		Desconocida		
Aparri	Cagayán	Ribera del Río Grande.			E	id		id		Se oyen muy raras veces.
Tuguegarao	id	Ribera del Río Grande, lejos del mar.		II	E y S			id	Con y sin temblor.	
Peñablanca	id	Al este del valle	Al anochecer	II	E	id		id	id	Antes de presentarse un tifón.
Ilagan	Isabela	Al sur del Valle de Cagayán.	Tarde y noche	II	N y S	Llanos	Caluroso, seco y claro.	id	Sin temblor.	
Vigan	Ilocos Sur	Costa, W								Respuesta negativa.
Candon	id	id								Id.
San Fernando	Unión	id								Id.
Baguio	Benguet	1,445 metros sobre el nivel del mar.								Id.
Bolinao	Pangasinán	Costa, N; cerca del Cabo Bolinao.		VI	SE	Islotes	Caluroso, claro, con SE.	Olas en las cavernas.	id	Se cree que la causa son las olas producidas por el viento SE y N las cualcs se introducen en cavernas y canales existentes en las llamadas "Cien Islas."
Alaminos	id	Terreno ondulado		II	E, S, SE	id	Con nortada	id	id	
San Manuel	id	N del llano de Pangasinán.		II	SE	Llanos		Desconocida	Con temblor.	
San Quintín	id	id	Durante el día	II	S	Nubes		id	Sin temblor.	
Santa Maria	id	id	Al anochecer	II	E	Montañas	Lluvioso	id	Con temblor.	
Anda	id	Islote del Golfo	Noche	II	NW, NE	Mar	Caluroso y lluvioso.	Olas contra las rocas.	Sin temblor.	Mayo y Junio se oyen al NW; Noviembre y Diciembre al NE.
Asingan	id	N del llano de Pangasinán.	Noche	II	N, S	Nubes	Lluvioso y calmoso.	Desconocida		
Villasis	id	Centro del llano de Pangasinán.	id	II	N, NW	Mar	Lluvioso	Las olas del mar	id	
San Jacinto	id	N del llano de Pangasinán.		II	NW	Montes	id	Desconocida	id	
Lingayén	id	Costa, W	Después de media noche.	II	NE	id	id	id	id	
San Isidro	Nueva Écija	Altas planicies	Noche	V	S	Llanos	id	id	id	
Tárlac	Tárlac	Llano, interior								Respuesta negativa.
Silang	Cavite	Tierras altas, toba volcánica.	Después de media noche.	II	NW	Mar	id	Las olas del mar	id	En toda la provincia se conocen los ruidos, Timalan, producidos en el sitio de este nombre, los cuales indican cambio de tiempo *bueno* en *malo* ó al revés *malo* en *bueno*. Si se oyen con baguio, éste cesará pronto.
Imus	id	Tierras bajas, tobas	Noche	II	W	id	id	id	id	

Lugar.	Provincia.	Situación.	Horas en que se oyen.	Grados de la Escala Davison.	Dirección de donde vienen.	Origen.	Tiempo reinante.	Causa.	Relación con los temblores.	Notas.
Batangas	Batangas	Costa, S	Tarde y noche	VII	NE, SW	Montes y mar	Seco, caluroso		Sin temblor	Los ruidos del SW indican cambio de tiempo; proceden del mar.
Atimonan	Tayabas	Costa, N	Noche y mañana	VI	SE	Montes		Desconocida	id	Indican cambio de tiempo, preceden á baguio.
Lopez	id	Sobre la costa, NW	Noche	II	E	id	Claro y caluroso	id	id	Alguna vez el grado VI con temblor.
Tayabas	id	Elevado en el Banahao, volcánico.		VII			id	id	id	Indica cambio de tiempo.
Nueva Cáceres	Camarines	Aluvión, lejos del mar	Noche y mañana	VII			id	id	id	
Legaspi	Albay	Costa, E		II	NW	Volcán	Claro, caluroso y calmoso.	El Volcán Mayón?	id	Algunas veces el grado V se oye hacia el mar y entonces el cambio de tiempo es seguro.
Guinobatan	id	Cerca del Mayón	Madrugada	VI	SW	id	Claro y caluroso	id	id	
Virac	Islas Catanduanes	En la costa, S		II	S, E	Volcán y mar	Nuboso	Desconocida	id	El ruido del S se cree ser del Volcán Mayón.
Romblón	Isla de Romblón	Isla pequeña								Respuesta negativa.
Cebú	Cebú	En la costa, E	Noche	III, VI	NW, S	Montes y mar		id	id	
Laoang	Sámar	Costa, N	id	II	S	Montes	Claro y seco	Subterránea	Con y sin temblor	
Borongan	id	Costa, E	Madrugada	II	N	Costa	Lluvioso	id	id	
Borongan	id	id	id	VII	NE	Mar	id	Las olas sobre la costa, y en el fondo del mar.	Sin temblor	Cuando se oyen en Nov., Dic. y Enero, anuncian con certeza un baguio en el Pacífico.
Tacloban	Leyte	Costa, NE								Respuesta negativa.
Burauen	id	Terreno montuoso	Noche	II	SW	Volcán	Lluvioso	Unas solfataras activas?.	Con y sin temblor	
Ormoc	id	Costa, W	Tarde y noche	II	NE	Montes	Caluroso y seco	Subterránea	id	
Maasin	id									Id.
Guimbal	Iloilo									Id.
Iloilo	id									Id.
Antique	Antique									Id.
Surigao	Surigao									Id.
Dapitan	Misamis	Costa, NW		II	SE	Montes	id	Desconocida	Sin temblor	
Butúan	Agusan	Aluvión, Río Agusan	Noche y madrugada.	VI	SE, SW	id	Caluroso, seco y calmoso.	id	id	Cuando se oyen con lluvia indican que ésta cesará: lo mismo, si se oyen al NW durante viento duro, éste cesará pronto.
Zamboanga	Provincia Mora	Costa, S	Noche	II	NE	id		id	id	
Isabela	Isla de Basilan	Costa, N								Respuesta negativa.
Cotabato	Provincia Mora	Junto al Río Grande	Madrugada y al anochecer.	II	E, W	Montes y mar	Caluroso	Subterránea	Con y sin temblor	
Davao	id	Costa, SE	Noche	II	E	Mar	Caluroso y calmoso.	id	id	
Joló	Joló	Costa, N		VI	SE, SSW	Montes			Con temblor	
Cagayán	Isla de Cagayán	Costa, S		VII	S	Costa	Caluroso y seco	Olas en las cavernas.	Sin temblor	Meses de Abril y Mayo.

Es de advertir que de las 53 poblaciones que figuran en el precedente cuadro, 30 están situadas sobre las costas del mar mientras que las restantes se pueden considerar como interiores; por más que, debido á la forma prolongada de las más de las islas, sólo dos de ellas, San Isidro y Tárlac, distan del mar más de 50 kilómetros. La mayor parte de las 30 poblaciones costeras miran á mares interinsulares ó por lo menos se hallan en golfos y bahías más ó menos cerradas, ó con islas delante: solamente unas pocas están situadas sobre costas bien abiertas, Vigan, Candón y San Fernando en la costa del Mar de China; Borongan en la del Mar Pacífico; Joló, Antique y Cagayán en las del Mar de Joló. Las trece estaciones que dieron respuesta negativa se hallan repartidas por todo el Archipiélago: 4 en la parte noroeste de Luzón, y las demás en las Islas Visayas y Mindanao.

RESULTADOS GENERALES.

Hora y clase de ruido.—El tiempo en que más frecuentemente se oyen los ruidos es, en el mayor número de los casos, desde el anochecer, durante la noche y en las primeras horas de la mañana, tanto que de los 26 casos en que se fija categóricamente el tiempo, solamente en uno se dice que es durante el día.

El género de ruido más frecuentemente sañalado, 27 veces en 39 casos, es el correspondiente al grado II de la escala de Davison; el grado VI se encuentra señalado siete veces y el VII cinco veces.

Dirección.—La dirección del horizonte de donde parecen proceder tales ruidos es casi sin excepción, la de las montañas ó del interior de la tierra, por manera que son muy pocas las estaciones costeras que oyen el ruido hacia el mar. Por el contrario, varias de las situadas en el interior los oyen en la dirección del mar.

Estación del año.—La época del año en que son más frecuentes es la de más calor, los meses de Marzo, Abril y Mayo, con calma y cielo despejado. Solamente en los pueblos de la Provincia de Pangasinán, casi sin excepción, se oyen en tiempo lluvioso; lo mismo ocurre en Borongan situado en la costa del Pacífico, donde se oyen no sólo en los meses de Junio á Octubre sino también en Noviembre, Diciembre y Enero.

Causas probables.—Respecto de la causa real ó aparente de los ruidos la mayor parte de los informantes dan respuesta negativa, llamándola desconocida, si bien muchos la suponen subterránea. Ocho informantes pertenecientes á muy diversas partes del Archipiélago, á Cagayán, Pangasinán, Cavite, Batangas, Tayabas, Albay, Sámar y Butúan, aseguran que en su pueblo ó provincia los ruidos están íntimamente relacionados con cambios de tiempo, generalmente con la proximidad de un tifón. En este caso la mayoría los atribuye á las olas del mar: así, en Cagayán el ruido anunciador de tifón se atribuye á las olas del Mar Pacífico que baten las escarpadas costas orientales de Luzón, las cuales distan del Valle de Cagayán, donde se hallan los pueblos de los informantes, de 40 á 50 kilómetros con una cordillera intermedia de poca altura. Los pueblos situados al Oeste del Golfo de Lingayén juzgan que los ruidos se producen en una serie de islotes ó rocas que ocupan, junto á la costa occidental del golfo, un espacio de 4 ó 5 kilómetros de longitud y se llaman las "Cien Islas;" como están formadas de caliza cavernosa creen que los ruidos son producidos por las olas que cuando reinan los vientos del sudeste y nordeste se introducen en las innumerables cavernas y canales que allí hay. En la Provincia de Cavite los ruidos, que llaman "Timalan," anuncian próximo cambio del tiempo reinante, de manera que indican "tiempo lluvioso" si se oyen con "buen tiempo" y "tiempo claro" si se oyen con "tiempo borrascoso:" su nombre vulgar "Timalan" es el de un riachuelo de la misma provincia que desemboca en la parte sur de la bahía de Manila, y es general la creencia de que tales ruidos son producidos por las olas del mar en la desembocadura de dicho río. Estos ruidos se oyen de casi toda la provincia aún de los pueblos que distan 30 kilómetros del sitio llamada "Timalan." Los habitantes de la Provincia de Batangas también opinan que los ruidos que indican cambio de tiempo proceden del mar, por oirse hacia el sudoeste, hacia la entrada del estrecho que separa la Isla de Luzón de la Isla de Mindoro. Los ruidos que en la costa oriental de Sámar indican que se acerca un tifón por el Pacífico, proceden de ciertos recodos y cantiles de la costa y se atribuyen al

oleaje del tifón. En Butúan, valle del Río Agusan, cuando los ruidos se oyen hacia el nordeste é indican cambio de tiempo, se supone también que son producidos por el oleaje del Pacífico que se precipita por varios estrechos dentro de la bahía de Butúan. Por último, el informante de Cagayán, pequeñas islas situadas en la parte sudoeste del Mar de Joló á poco más de 80 millas del extremo Norte de Borneo, asegura que los ruidos que se oyen en la parte sur de las isla en los meses de Abril y Mayo, en que reina el viento sudeste, son efecto de las olas que se introducen dentro de ciertos conductos subterráneos que allí existen y cuya entrada queda libre durante la baja mar; estos conductos se prolongan por muchos metros hacia debajo de las cercanas colinas.

Son muy raros los casos en que los ruidos se relacionan con los temblores de tierra. En estos pocos casos los informantes suelen distinguir entre los ruidos frecuentemente oídos y el rumor sordo que algunas veces precede á los temblores, el cual, creen que es producido por el movimiento de los árboles y casas.

Como conclusión final de estas notas juzgo deber expresar mi opinión acerca del origen de algunos de estos ruidos. Atendidos los inmensos oleajes que muchos de los tifones que se desarrollan en el Pacífico producen no sólo en las costas orientales de Luzón, Sámar y Mindanao, sino también en ciertos mares y canales interinsulares, me inclino á admitir que en los casos citados en que parece existir verdadera relación entre los ruidos y un próximo cambio de tiempo, tales ruidos son producidos por el oleaje al chocar en determinados sitios escarpados y cavernosos de las costas. Sabido es que los tifones del Pacífico á veces producen oleajes excepcionales que se propagan á distancias de más de 1,000 kilómetros, llegando por consiguiente á nuestras costas días antes que el tiempo comience á ser borrascoso y el viento tenga fuerza apreciable.

Por otra parte, durante los meses secos y calurosos, favorables á los ruidos, como son Marzo, Abril y Mayo, el viento dominante del sudeste produce un movimiento del mar, muy ruidoso al chocar con las costas, pero casi insensible dentro del mar á pocos metros de la orilla: de ésto tenemos la experiencia en las playas del Sur de Manila donde, con ser ellas de arena y muy llanas, el mar rompe en estos meses con un ruido que se oye distintamente desde el Observatorio, mientras nada suele oirse en otros meses con viento sudoeste y mayor oleaje. Lo que sucede aquí cerca de Manila en una costa arenosa y llana, ¿no puede verificarse en otras costas abruptas y producir en lugar del ruido sordo que se oye desde el Observatorio, verdaderos retumbos y detonaciones? ¿No puede además este ruido del mar oirse á grandes distancias y aún tal vez mejor á cierta distancia del mar, debido á especiales condiciones de la atmósfera y á posibles interferencias y reflexiones? ¿No pudieran en muchos casos las montañas vecinas coronadas de cúmulus tempestuosos reflejar el ruido que, proviniendo realmente del mar, parecería provenir de los montes, de donde parece provenir, según se ha dicho, en muchos pueblos costeros? Desde el espacioso jardín del Observatorio se oyen con frecuencia al caer de la tarde las campanas de una iglesia que está á 1 kilómetro de distancia al sur; mas, debido sin duda al muro del jardín, al arbolado y á un gran edificio vecino en la misma dirección sur, dicho sonido se oye hacia el este-nordeste por llegar sólo reflejado por unos edificios y arbolado que están á 200 metros en aquella dirección: nadie que no tenga experiencia del hecho creería que la causa del tal sonido está al sur y no al este-nordeste. Este hecho y otros similares que se podrían citar me inducen á sospechar que en pueblos cercanos á las costas pero privados de la vista del mar por una muralla de vegetación, ó por pequeñas lomas, es posible que no se oigan los ruidos de las olas sino por reflexión en los montes vecinos. En este Archipiélago son muchos los que se hallan en tales condiciones, por ser relativamente estrechas y montañosas casi todas las islas y resultar por fuerza estrechas las planicies costeras. Espero que ulteriores observaciones podrán aclarar más este punto: se encarga á los observadores del Weather Bureau que, visto en estas notas el *estado de la cuestión,* continúen haciendo investigaciones para que algún día pueda resolverse. También se invita á las demás personas que leyeren el MONTHLY BULLETIN á que se sirvan enviar á esta Oficina cualquier observación que hagan de estos fenómenos, con la seguridad de que se recibirán con suma gratitud.

118° 120° 122° 124° 126°

20° 18° 16° 14° 12° 10° 8° 6°

BATAN ISLANDS

Balintang Channel

BABUYAN ISLANDS

ILOCOS NORTE

ILOCOS SUR

ABRA

CAGAYAN

MOUNTAIN PROVINCE

NVA. VIZCAYA

ISABELA

LUZON

Lingayen Gulf

PANGASINAN

Casiguran Bay

NVA. ECIJA

TARLAC

ZAMBALES

PAMPANGA

BULACAN

RIZAL

MANILA BAY

Port Sual

BATAAN

CAVITE

LAGUNA BAY

LAGUNA

BATANGAS

Lubang I.

CHINA SEA

PACIFIC OCEAN

Polillo I.

Laman Bay

Sr. Miguel Bay

AMBOS CAMARINES

Catanduanes I.

MINDORO

Mindoro Strait

Marinduque I.

Burias I.

Romblon I.

Tablas I.

Sibuyan I.

SORSOGON

MASBATE

Bernardino Channel

Busuanga I.

Calamianes Is.

Culion I.

CAPIZ

PANAY

ANTIQUE

ILOILO

SAMAR

LEYTE

Cuyos Is.

OCCIDENTAL NEGROS

ORIENTAL NEGROS

CEBU

Dumaran I.

PALAWAN

Dinagat I.

Surigao Strait

BOHOL

Siargao I.

Kagayanes Is.

Kavilli I.

Camiguin I.

Butuan Bay

Siquijor I.

Tub-Bataha

Dapitan Bay

Iligan Bay

MISAMIS

BUKIDNON PROV.

AGUSAN PROV.

Sindangan Bay

SULU SEA

Balabac I.

St Michael Is.

ZAMBOANGA DISTRICT

LANAO DISTRICT

Illana Bay

MINDANAO

DAVAO DISTRICT

Kagayan Sulu

Basilan Strait

Basilan I.

COTABATO DISTRICT

Davao Gulf

MOORO GULF

Jolo

SULU DISTRICT

Tawi-tawi

SULU ARCHIPELAGO

Sarangani Bay

Sarangani Is.

BORNEO

CELEBES SEA

BULLETIN FOR JULY, 1910.

METEOROLOGICAL BULLETIN FOR JULY, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The monthly mean atmospheric pressure has been reported by all the stations in the Philippines as somewhat above the normal for this month and the monthly mean for July, 1909. The highest pressures were registered on the 6th, and the lowest on the 14th.

The mean temperature of the month is likewise somewhat higher than that of July, 1909. The extreme temperatures for Manila were 34.0° C. and 21.6° C. They were registered on the 25th and 8th, respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR JULY, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from July, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from July, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran [1]	757.47	----------	759.75	6	755.33	14	27.9	+0.6	35.2	21,31	22.4	22
Surigao	57.91 [2]	+0.30	60.12	6	55.72	14	27 [3]	+ .2	32.9	11	22	24
Cebu	57.86	+ .25	60.22	6	55.59	14	27.3	+ .4	32.9	17	22	16
Iloilo	58.04	+ .27	60.29	6	56.08	14	27.2	+ .6	34.1	20	22.5	6,27
Ormoc	58.07	+ .51	60.49	6	55.86	14	26.2	+ .2	33.1	19	20.2	17
Tacloban	58.43	+ .74	61.02	6	56.05	14	27.2	+ .2	34.4	23	22.3	9
Calbayog	58.25	+ .53	60.78	6	55.56	14	26.7	+ .5	34	9	21.5	27
Legaspi	57.80	+ .63	60.54	6	55.05	14	27.4	+ .8	35	27	22.2	27
Atimonan	57.49	+ .78	60.23	6	54.62	14	27.5	+1.1	34.5	27	22	3
Manila	57.75	+ .88	60.39	6	55.35	14	26.7	+ .6	34	25	21.6	8
San Isidro	57.62	+ .99	60.20	6	55.23	14	26.6	+ .6	34.8	7	21.5	8,21
Dagupan	57.48	+1.17	60.16	6	55.20	14	27.3	+ .6	35.6	5,19	21.8	17
Bolinao	57.19	+ .98	59.96	6	54.81	14	27.1	+ .6	33.9	19	22.1	15
Baguio [4]	635.69	+1.11	638.29	6	633 59	14	17.9	+ .4	24.5	19,21	14	16
Vigan	757.41	+1.42	760.44	6	755.12	14	27.1	+ .2	33.1	25	21.9	16
Tuguegarao	57.04	+1.03	60.27	6	54.33	14	28	+ .7	37.6	29	21.6	18,21
Aparri	57.17	+ .84	60.48	6	54.06	14	27.8	+1	34	11,22	22.6	21

[1] The barometric readings of this station seem to be too low.
[2] 28 days of observation.
[3] 30 days of observation.
[4] The barometric readings of this station are not reduced to sea level.

Precipitation.—As it was to be expected in a month so poor in atmospheric disturbances near the Philippines, the monthly total of rainfall for all our stations was considerably below that of the preceding year, if we except only a few stations in Mindanao, like Butuan and Zamboanga. The total amount of water collected in the rain gauges of the Central Observatory falls short of the normal for July by 174.3 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF JULY, 1910.

Station.	Total.	Departure from July, 1909.	Rainy days.	Departure from July, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from July, 1909.	Rainy days.	Departure from July, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	137.2	—108.4	9	— 6	31.2	7	Calapan	111	— 240.4	11	—10	49.2	20
Isabela, Basilan	121	—248.4	18	0	19.5	4	Virac	93.2	— 341.9	15	— 5	17	19
Zamboanga	84.2	+ 8.2	10	— 3	30.3	5	Nueva Caceres	136.1	— 186.1	13	—14	49.5	1
Davao	176.8	—123.3	11	0	31.2	18	Batangas	62.5	— 257.5	10	—14	13	13
Cagayan, Misamis	13.3	—235	5	—13	4.6	6	Atimonan	91.2	— 146.1	13	— 9	32.8	22
Dapitan	25.9	— 42	11	+ 1	5.8	24	Silang	239.2	— 493.2	12	—13	66.5	13
Butuan	151.2	+ 15.4	11	— 7	45.2	6	Santa Cruz, La Laguna	104.4[1]				38.9	22
Dumaguete	172.4		10		74.7	19	Antipolo	234.8		19		73.4	16
Yap, W. Carolines	187.7		23		51.8	31	Manila	214.9	— 346.9	16	—11	61.4	16
Tagbilaran	68.5	— 29.4	9	— 8	17.8	25	Iba	418.3		20		74.7	16
Surigao	143.1	— 66.4	12	— 4	57.1	23	San Isidro	178.3	— 295.9	22	— 3	29.8	12
Maasin	226.3	—282.2	9	— 7	46.7	5	Tarlac	213.6	— 134.8	18	— 6	27.4	24
Cebu	113.5	—165.5	14	—11	31.7	1	Baler	86.2	— 701.9	9	—11	22.4	20
Iloilo	57	—174.6	9	—14	21.8	8	Dagupan	183	— 492.4	18	— 5	29.7	5
San Jose Buenavista	238.6	—325.2	19	— 8	57.7	14	Bolinao	254.2	— 270.8	17	—12	79.1	15
Cuyo	282.8		14		58.2	26	Baguio, Benguet	405.2	— 798.6	28	0	72.4	16
Ormoc	151.9	—127.3	15	— 5	50	14	San Fernando, Union	156.6[2]				59.7	16
Tacloban	164.3	—171.7	19	0	24.4	5	Echagüe	171.4	— 47.6	15	—10	41.1	11
Borongan	231.4	—139.7	20	+ 2	87.4	3	Candon	350.3	— 546.3	15	— 9	158	16
Calbayog	217.4	— 96.9	16	— 4	48	1	Vigan	305.5	— 458.8	20	— 3	71.5	16
Gubat	57.1	—313.4	11	— 9	28.4	3	Tuguegarao	88.7	— 289.8	10	— 5	21.8	15
Legaspi	199.3	—248.4	12	—15	55.1	16	Laoag	395.2	— 289.6	15	—10	85.6	16
Sumay, Guam	257.7	—148.1	21	— 4	39.4	26	Aparri	22	— 410.3	7	— 8	5.1	7
							Sto. Domingo, Batanes Is.	260.9	— 204.7	13	— 9	102.3	17

[1] 28 days of observation.

[2] 27 days of observation.

DEPRESSIONS AND TYPHOONS.

During this month we were able to announce three typhoons in the Pacific and a depression in the northern part of the China Sea. Besides, there were signs of another depression in the southern part of the same China Sea; but we have so little information about it, that we can not give to its existence and track more than a slight probability. We will say now a few words on each of these disturbances in particular. Their approximate tracks are included in Plates III and IV together with the tracks of the depressions and typhoons of last June.

DEPRESSION OF JULY 3 TO 6, 1910.

Manila Observatory said the following in the ordinary weather notes for July 3, 4 and 5.

July 3, 11.50 a. m.: Pressure is lowest over the China Sea south of Hongkong.
July 4, 11.55 a. m.: Pressure is lowest over the China Sea in the neighborhood of the Paracels.
July 5, 11.50 a. m.: There is a typhoon in the Tongking Gulf, SW of Hainan, moving WNW.

This depression seems to have formed on the 2d and 3d of July near the Macclesfield Bank. On the 4th it passed north of, and not far from, the steamer *Nanshan* when she was west of the Paracels on her trip from Saigon to Hongkong. On the morning of the 5th the center of the depression was situated in the southern part of the Gulf of Tongking, and on the afternoon of the same day it entered Indo China not far from 19° latitude N.

From Hongkong Observatory we received the following typhoon warnings:

July 4, 7 p. m.: Typhoon near Paracels; direction of motion unknown.
July 5, 11 a. m.: Typhoon in Hainan, moving WNW.

Zikawei Observatory, likewise, announced this depression to the stations along the China coast by the following telegrams:

July 4, 9 p. m.: Typhoon south of Macclesfield Bank, moving NW.
July 5, noon: Typhoon over Paracels, moving NW.
July 5, 9 p. m.: Typhoon over Tongking Gulf, moving NW.

Plate III.

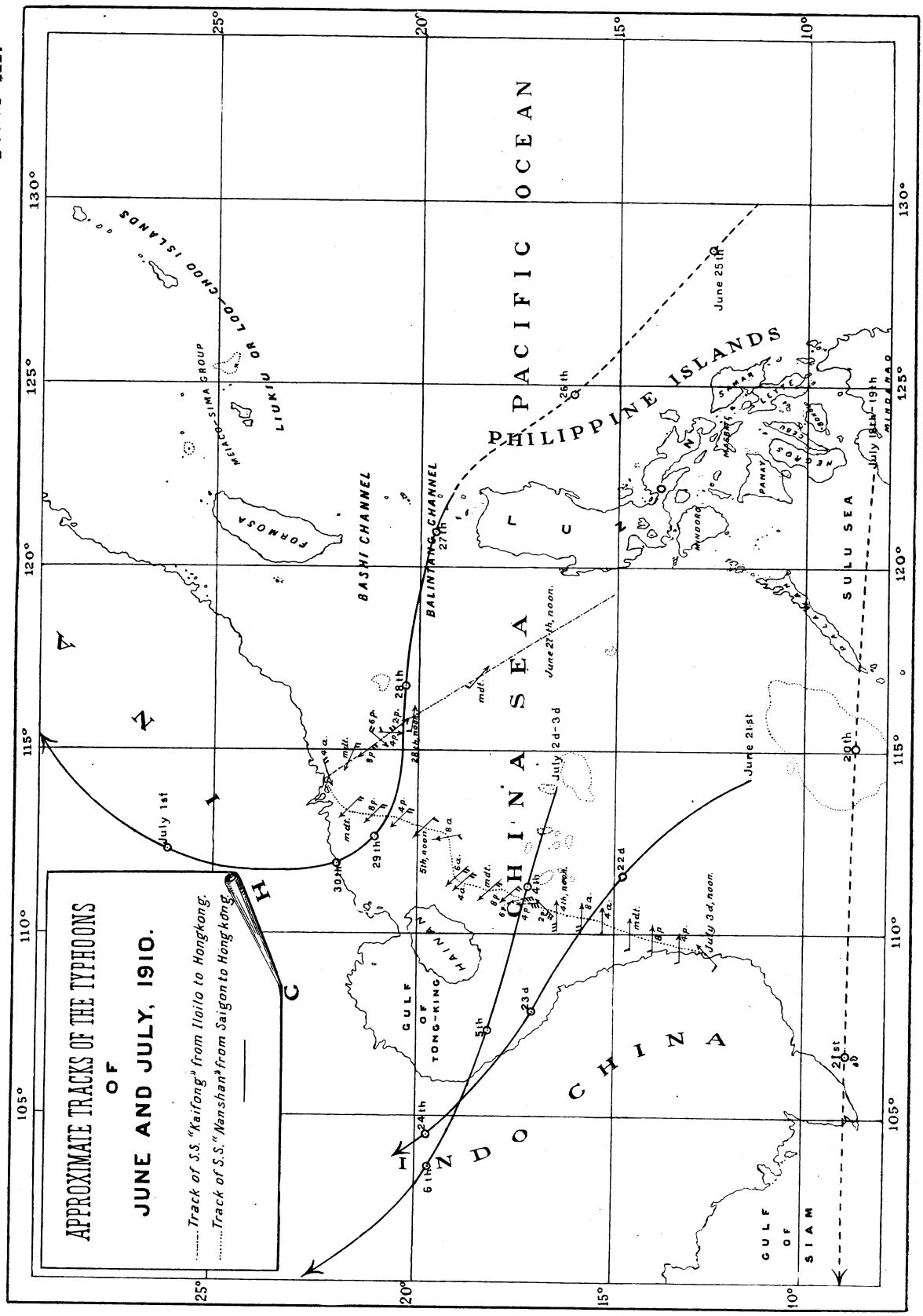
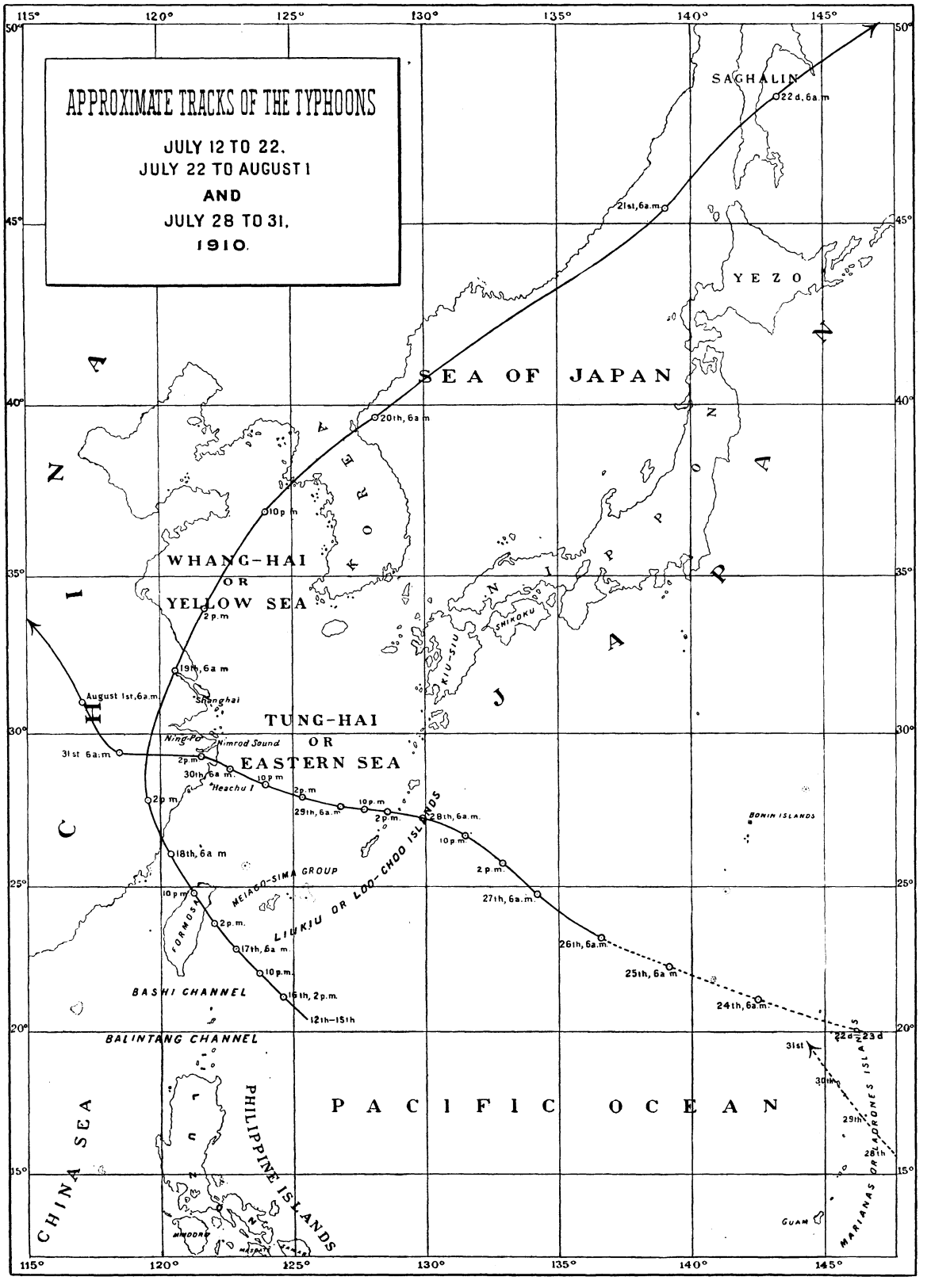

APPROXIMATE TRACKS OF THE TYPHOONS
OF
JUNE AND JULY, 1910.
Track of S.S. "Kaifong" from Iloilo to Hongkong.
Track of S.S. "Hanshan" from Saigon to Hongkong.
PACIFIC OCEAN
CHINA SEA
INDO CHINA
PHILIPPINE ISLANDS
LUZON
SULU SEA
FORMOSA
LIUKIU OR LOOCHOO ISLANDS
MIYAKO-SIMA GROUP
BASHI CHANNEL
BALINTANG CHANNEL
GULF OF TONG-KING
GULF OF SIAM
HAINAN
PANAY
MINDORO
MINDANAO
June 25th
June 21st, noon.
June 21st
July 2d-3d
July 3d, noon.
July 19th
July 1st
26th
27th
28th
29th
30th
22d
23d
24th
6th
5th
20th
21st
105°
110°
115°
120°
125°
130°
25°
20°
15°
10°

Plate IV


APPROXIMATE TRACKS OF THE TYPHOONS
JULY 12 TO 22.
JULY 22 TO AUGUST 1
AND
JULY 28 TO 31.
1910.
SAGHALIN
22d, 6a.m
21st, 6a.m
YEZO
SEA OF JAPAN
20th, 6a.m
10p.m
WHANG-HAI
OR
YELLOW SEA
2p.m
19th, 6a.m
August 1st, 6a.m.
Shanghai
TUNG-HAI
OR
EASTERN SEA
Ning-Po
Nimrod Sound
31st 6a.m
30th, 6a.m.
Heachu I
29th, 6a.m.
28th, 6a.m.
18th, 6a.m
MEIACO-SIMA GROUP
LIUKIU OR LOO-CHOO ISLANDS
BONIN ISLANDS
27th, 6a.m.
26th, 6a.m.
25th, 6a.m
24th, 6a.m.
23d
22d
17th, 6a.m.
16th, 2p.m.
12th–15th
BASHI CHANNEL
BALINTANG CHANNEL
PHILIPPINE ISLANDS
CHINA SEA
PACIFIC OCEAN
MARIANAS OR LADRONES ISLANDS
GUAM
MINDORO
115°
120°
125°
130°
135°
140°
145°
50°
45°
40°
35°
30°
25°
20°
15°

From the daily reports of Phulien Observatory, Indo China, we copy here a few notes referring to the same depression:

July 4, noon: A cyclonic depression is forming in the China Sea. The winds observed to-day in our stations along the coast obey to this depression. Its central area, rather large and not very deep, lies in the neighborhood of the southern Paracels.

July 5, 12.10 p. m.: The cyclonic depression announced yesterday has moved northwestward. It has been the cause of prolonged abundant rains in all the stations of the Gulf of Tongking. Its center, not very deep, lies at present over Hainan and is moving to WNW.

July 6, noon: The depression appears to-day over southwestern Tongking where it tends to fill up.

TYPHOON OF JULY 12 TO 21, 1910.

In order to show the place of origin of this typhoon we publish in the following table the observations taken at Santo Domingo, Batanes Islands, since the afternoon of the 12th, when the winds began to blow steadily from WNW.

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO, BATANES ISLANDS, JULY 12 to 17, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Remarks.
			Direction.	Force.		
July 12:	*mm.*	*mm.*		*0–12.*	*mm.*	
2 p. m.	755.75	—0.60	WNW	5		Rain-clouds to the S quad.; lunar halo at night.
July 13:						
6 a. m.	55.16	—1.15	WNW	4		Irregular veil of Ci.-S. at noon.
2 p. m.	54.31	—1.44	WNW	4		Coloration of Ci. S. at sunset.
July 14:						
6 a. m.	53.49	—1.67	WNW	5		Fresh to strong breeze.
10 a. m.	53.58		WNW	4		Squally winds from NW at 11 a. m.
2 p. m.	53.23	—1.08	WNW	4		Light veil of Ci.-S.
6 p. m.	53.24		WNW	3		
July 15:						
6 a. m.	53.60	+ .11	WNW	2		
2 p. m.	53.20	— .03	NW	4	2.5	Drizzle and lightning to the S quad. in the evening.
July 16:						
6 a. m.	53	— .60	NW	3		Light rain squalls in the forenoon.
2 p. m.	51.60	—1.60	NW	4		Moderate to fresh breeze.
4 p. m.	50.87		NW	4		Do.
6 p. m.	51.12		NW	4		
8 p. m.	51.34		NW	4		Lightning toward SSW.
10 p. m.	51.30		NW	4	32.2	Rain squalls at midnight.
July 17:						
6 a. m.	50.55	—2.45	WSW	3		Heavy rain with strong WSW breeze in the morning.
2 p. m.	52.76	+1.16	SSW	5	102.3	Drizzle with fresh breeze.

From these observations it seems quite clear that this typhoon was forming during the 12th, 13th, and 14th to the east of the Batanes Islands or of Balintang Channel. It appears also that the center of the typhoon remained almost stationary for rather a long time, as there were no signs of any progressive movement before the 16th. This is evidently proved by the fact that the observer at Santo Domingo, who had begun to take extraordinary observations on the 14th, was satisfied on the 15th with the ordinary observations of 6 a. m. and 2 p. m., undoubtedly because he saw in the barometer no signs of further falling.

Manila Observatory wired on the 14th this preliminary typhoon warning to Tokio, Zikawei, Taihoku, Hongkong, and Phulien:

July 14, 11.40 a. m.: Low-pressure area extending from the China Sea to the Pacific across northern Luzon and the Balintang Channel. A real typhoon may develop later.

On the same day Zikawei Observatory sent out its first warnings on this typhoon to the stations along the China coast:

July 14, noon: Typhoon far to the east of the Philippine Islands; direction unknown.

July 14, 3.15 p. m.: Typhoon south of Loochoo Islands, moving NW.

Yet, we believe that until the afternoon of the 16th the observations of Luzon and Formosa without those from Santo Domingo were not sufficiently convincing to give out as certain the existence of a real typhoon over the Pacific. And, as a matter of fact, even Zikawei Observatory, in situating, on the weather map of the 15th, the supposed cyclonic center south of the Loochoos, did not use the word "typhoon" but the word "minimum," and this with a question mark.

The telegrams exchanged between Manila and Hongkong observatories on the 16th and 17th are as follows:

Manila.—July 16, 5 p. m.: Typhoon SE of Formosa; direction unknown.
July 17, 12.30 p. m.: Typhoon E of Formosa, moving WNW or NW.
July 17, 4 p. m.: Typhoon near or over Formosa, moving WNW.
Hongkong.—July 16, 6.45 p. m.: Typhoon E of Bashee Channel; direction unknown.
July 17, noon: Typhoon E of Formosa, moving WNW.

On the same days the following warnings were sent by Zikawei Observatory to the stations on the China coast:

July 16, 4.30 p. m.: Typhoon S of Meiacosima group, moving NW.
July 17, 10 a. m.: Typhoon E of Formosa, moving NW.
July 17, 4.15 p. m.: Typhoon over Formosa, moving NW.

Our readers will notice in the track of this typhoon given in Plate IV, that it moved to NW, approximately, during the 16th and 17th. It was on the 18th that it began to incline northward, having penetrated into the Continent on the morning of the same day at a point near 120° longitude E and 27° latitude N.

The second part of the track of this typhoon, after it entered the Continent, is thus described by Zikawei Observatory:

On land the centre advanced with increased speed. A very sharp minimum was registered at Zikawei, on the 19th, at 4.40 a. m.; the center was passing W of Shanghai. It passed E of Chinkiang about two hours later. At 3 p. m. it was on the Yellow Sea, about midway between Shanghai and Tsingtau, inclining more and more to NE. It struck the coast of Korea, not far from Chemulpo, was near Yuensan, at sea, on the 20th at 6 a. m. and on the 21st at the same hour reached the neighborhood of La Perouse Strait.

Between Manila and Hongkong the following telegrams were exchanged on the 18th:

Manila.—July 18, 9.30 a. m.: Typhoon near or over the northern part of Formosa Channel, moving NW or NNW.
Honkong.—July 18, 11 a. m.: Typhoon or storm center to the north of the Formosa Channel, moving NW.

Zikawei Observatory followed the track of the typhoon from the 18th to the 20th by means of these warnings wired to the stations on the China coast:

July 18, 8.35 a. m.: Typhoon off Turnabout, moving NW.
July 18, 11.30 a. m.: Typhoon off Foochow, moving NW.
July 18, 3 p. m.: Typhoon off Tungyung Light, moving NNW.
July 18, 4.45 p. m.: Typhoon coast of Chekiang, moving N.
July 19, 7.50 a. m.: Typhoon NW of Shanghai, moving N.
July 19, 11.20 a. m.: Typhoon SE of Tsingtau, moving NNE.
July 20, 10 a. m.: Typhoon E of Korea, moving NE.

DEPRESSION OF JULY 18 TO 21, 1910.

The data we possess on this depression are very incomplete. We can only say that our weather maps gave indications of it on the 19th and 20th, its center being situated, respectively, over the Sulu Sea and the China Sea west of Palawan Island. The observations from Indo China likewise seemed to show the existence of a depression to the south on the afternoon of the 21st.

Manila Observatory sent the following warnings to its foreign correspondents in the Far East:

July 19, 4 p. m.: Depression over the Sulu Sea. It may develop into a typhoon.
July 20, 4 p. m.: Depression W of Palawan, moving W or WNW.

TYPHOON OF JULY 23 TO AUGUST 2, 1910.

This typhoon seems to have formed on the 22d and 23d to the NE of the Ladrone or Mariana Islands. The observations received from Chichijima and Guam, stations situated, respectively, to the north and south of the track of this typhoon, caused Manila Observatory to send out this first typhoon warning:

July 23, 10.55 a. m.: Typhoon near or over the northern Ladrone or Mariana Islands, moving W.

In the table below we publish the observations just mentioned from Chichijima and Guam. The winds observed in the former station led us to suspect that there was a secondary center recurving to the east of the Bonin Islands besides the main one of which we shall now speak and whose track is given in Plate IV.

METEOROLOGICAL OBSERVATIONS FOR JULY 22 TO 26, 1910.

Sumay, Guam, Ladrone Islands.						Chichijima, Bonin Islands.				
Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Date and hour.	Pressure.	Difference in 24 hours.	Wind.	
			Direction.	Force.					Direction.	Force.
July 22:	*mm.*	*mm.*		*0–12.*	*mm.*	July 23:	*mm.*	*mm.*		*0–12.*
6 a. m	757.05	—1.60	Calm	------	------	6 a. m	755.6	—3.9	NE	1
2 p. m	55.70	—2.31	SW	3	------	2 p. m	54.1	—4.5	NE	1
July 23:						10 p. m	------	------	NE	1
6 a. m	54.80	—2.25	SW	3	------	July 24:				
10 a. m	55.25	------	SW	3	------	6 a. m	51.8	—3.8	N	1
Noon	54.88	------	SW	4	------	2 p. m	50.6	—3.5	NNE	1
2 p. m	54.18	—1.52	SW	3	------	10 p. m	------	------	Calm	------
4 p. m	52.85	—2.38	SW	3	6.4	July 25:				
July 24:						6 a. m	51.2	— .6	Calm	------
6 a. m	54.57	— .23	SSW	3	------	2 p. m	53.1	+2.5	SE	1
10 a. m	54.92	— .33	SW	3	------	10 p. m	------	------	SE	1
Noon	54.52	— .36	SW	4	------	July 26:				
2 p. m	54.10	— .08	SW	3	------	6 a. m	55.1	+3.9	SE	1
4 p. m	54.05	+1.20	SW	3	22.9	2 p. m	55.1	+2	SE	1

The following telegrams were sent by Manila Observatory to its foreign correspondents in the Far East during the period 25th to 29th:

July 25, 4 p. m.: Typhoon in the Pacific Ocean, about halfway between the Mariana Islands and the Loochoos, moving WNW.
July 27, 10.50 a. m.: Typhoon E of Naha (Loochoos Islands), moving NW.
July 28, 10.35 a. m.: Typhoon NE of Naha (Loochoos Islands), moving NW.
July 29, 11.30 a. m.: Typhoon NW of Naha (Loochoos Islands), moving W.

Hongkong Observatory, on its part, favored us with these warnings:

July 27, 11.30 a. m.: Typhoon E of the Loochoos Islands, moving NW.
July 28, 10 a. m.: Typhoon near Loochoos Islands, moving WNW.
July 30, 11 a. m.: Typhoon S of Ningpo, moving W.

Zikawei Observatory wired to the stations on the China coast the following warnings from July 23 to 31:

July 23, 10 a. m.: Typhoon between Mariana and Bonin Islands, moving NW.
July 23, 4.30 p. m.: Typhoon SE of Loochoos Islands, moving WNW.
July 24, noon: Typhoon SE of Loochoos Islands, moving NW.
July 25, 10 a. m.: Typhoon SE of Loochoos Islands, moving NW.
July 26, 10 a. m.: Typhoon SE of Loochoos Islands, moving NW.
July 27, 10 a. m.: Typhoon E of Loochoos Islands, moving NNW.
July 28, 9.45 a. m.: Typhoon over Loochoos Islands, moving NW.
July 28, 5.10 p. m.: Typhoon W of Loochoos Islands, moving NW.

July 29, 1 p. m.: Typhoon NW of Loochoos Islands, moving NW.
July 29, 4.30 p. m.: Typhoon NW of Loochoos Islands, moving W.
July 30, 8.20 a. m.: Typhoon NW of Loochoos Islands, moving WNW.
July 30, 11 a. m.: Typhoon SE of Hiesan Light, moving WNW.
July 30, 4 p. m.: Typhoon coast of Checkiang, moving NW.
July 31, 8.20 a. m.: Typhoon W of Shanghai, moving NW.
July 31, 10.30 a. m.: Typhoon W of Shanghai, recurving.
July 31, 4.25 p. m.: Typhoon NW of Shanghai, moving NNW.

The same Zikawei Observatory has published some data referring to this typhoon and from them we have taken the observations made on board the steamers *Hanyang, Yung-chow,* and *Hsing-kong* which are embodied in the following table.

METEOROLOGICAL OBSERVATIONS FOR JULY 29 AND 30, 1910.

S. S. "Hanyang." (Near Heachu.) Captain, G. Byers.				S. S. "Yung-chow." (Anchored at Ningpo.) Captain, W. Frazier.				S. S. "Hsingkong." (Anchored at Nimrod Sound.) Captain, F. H. Hamblin.			
Date and hour.	Pressure.	Wind.		Date and hour.	Pressure.	Wind.		Date and hour.	Pressure.	Wind.	
		Direction.	Force.			Direction.	Force.			Direction.	Force.
July 29:	*mm.*		*0–12.*	July 29:	*mm.*		*0–12.*	July 30:	*mm.*		*0–12.*
6 p. m.	747	SW	2	4 p. m.	748.52	NE	4	4 a. m.	745.98	NNE	7
8 p. m.	46.24	N	5	July 30:				6 a. m.	43.44	NNE	8
10 p. m.	43.95	NW	8	4 a. m.	45.73	NNE	6	8 a. m.	40.90	NE	9
12 mdt.	43.19	NNW	8	8 a. m.	44.46	NNE	7	9 a. m.	38.36	NE	9
July 30:				10 a. m	43.19	NNE	8	10 a. m	36.84	NE	9
2 a. m.	42.17	NW-W	9	Noon	40.14	NNE	10	11 a. m	33.54	E	10
4 a. m.	41.67	WbyN	9–10	2 p. m.	39.13	NNE	11	Noon	33.79	EbyS	6–7
6 a. m.	41.16	WSW	9–10	4 p. m.	40.40	ENE	11	1 p. m.	35.06	SE–E	11
8 a. m.	40.90	SW-W	9	6 p. m.	41.92	ENE	10	2 p. m.	38.62	SE–E	12
10 a. m	40.90	SW-S	9	8 p. m.	44.71	E	9	3 p. m.	40.40	SE–E	12
Noon	41.92	SSW	8	9 p. m.	-------	SE	7	4 p. m.	40.90	SE–E	10
4 p. m.	44.71	S-E	6	-------	-------	-------	------	7 p. m.	47.51	SE	7

The three steamers were not far from the center of the typhoon—two to the north and one to the south of its track. With their observations it has been easy to determine the point of the coast where the center entered the Continent on the morning of the 30th. Besides, the fact that at Ningpo, where the steamer *Yung-chow* was anchored, the barometric minimum took place at 2 p. m. of the 30th with winds blowing still from NNE, and that these winds veered only to the ENE at 3 p. m. and did not blow decidedly from the E until after 6 p. m. has caused us to suppose in the track of this typhoon that when it penetrated into the Continent and during the whole afternoon and night of the 30th it continued moving due west without any inclination to the north. This is confirmed by the other fact that the typhoon was at its shortest distance from Shanghai at 5 p. m. of the 30th when the winds at Ningpo were still blowing from ENE. This westerly direction of the typhoon, even in the afternoon and night of the 30th, agrees entirely with the daily weather maps of Zikawei Observatory. It was only after 6 a. m. of the 31st that the typhoon began to move NW and NNW; so that its center could be situated W of Shanghai, although far from the place, at 6 a. m. of August 1.

DEPRESSION OR TYPHOON OF JULY 27 TO 31, 1910.

We will finish these notes by mentioning the last depression or typhoon, which could be announced only by Manila Observatory, thanks to the observations received from Guam, Ladrone Islands. See the observations in the following table.

METEOROLOGICAL OBSERVATIONS AT SUMAY, GUAM, LADRONE ISLANDS, JULY 27 TO 31, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).
			Direction.	Force.					Direction.	Force.	
July 27:	*mm.*	*mm.*		*0–12.*	*mm.*	July 29:	*mm.*	*mm.*		*0–12.*	*mm.*
6 a. m.	758.20	+0.60	WSW	2	-------	2 p. m.	754.55	+0.50	WNW	3	-------
2 p. m.	57	— .22	W	2	38.1	3:30 p. m.	54.48	--------	WNW	3	1.5
July 28:						July 30:					
6 a. m.	56.27	—1.93	WSW	2	-------	6 a. m.	55.73	+ .21	W	2	-------
Noon	54.80	--------	WSW	4	-------	2 p. m.	55.13	+ .58	WSW	2	-------
2 p. m.	54.05	—2.95	W	3	-------	3 p. m.	54.63	-------	WSW	2	7.9
3 p. m.	54.13	-------	WNW	3	-------	July 31:					
4 p. m.	54.10	-------	WNW	2	35.6	6 a. m.	56.67	+ .94	SW	1	-------
July 29:						2 p. m.	55.48	+ .35	SW	1	29.4
6 a. m.	55.52	— .75	WSW	3	-------						

From these data our readers will easily understand why Manila Observatory decided to wire the following warning to Tokio, Zikawei, Taihoku, Hongkong, and Phulien:

July 28, 10.35 a. m.: Typhoon near or over the northern Ladrone or Mariana Islands; direction unknown.

In all probability the typhoon filled up on the 31st in the neighborhood of the northern part of the Ladrone or Mariana Islands.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La presión atmosférica media de este mes es para todas nuestras estaciones algo superior á la normal de Julio y á la media del mismo mes del año próximo pasado. Las máximas presiones se registraron el día 6 y las mínimas el día 14.

La temperatura media mensual es también algo mayor que la de Julio 1909. Las temperaturas extremas de Manila fueron 34.0° C. y 21.6° C., registradas respectivamente los días 25 y 8.

Precipitación acuosa.—Como era de esperar, dada la escasez de perturbaciones atmosféricas en las cercanías de Filipinas, la precipitación acuosa mensual resulta en todas partes bastante menor que la del año pasado, excepción hecha únicamente de dos estaciones de Mindanao, Butúan y Zamboanga. La cantidad de agua recogida en los pluviómetros del Observatorio Central difiere de la normal de Julio en—174.3 mm.

DEPRESIONES Y TIFONES.

Durante este mes de Julio ha habido tres tifones en el Pacífico y una depresión en la parte septentrional del Mar de China. Además, tenemos indicios de otra depresión en la parte sur del mismo Mar de China, si bien por falta de datos suficientes no podemos dar á su existencia y trayectoria un valor más que un tanto probable. Diremos ahora algo sobre cada una de estas perturbaciones atmosféricas en particular. Sus trayectorias aproximadas las damos en las láminas III y IV, en la primera de las cuales van incluídas juntamente las trayectorias de las depresiones y tifones de Junio último, según hicimos constar en la revista de dicho mes.

DEPRESIÓN DE 3 Á 6 DE JULIO, 1910.

El Observatorio de Manila decía lo siguiente en las notas ordinarias del tiempo de los días 3, 4 y 5 de Julio:

Día 3, 11.50 a. m.: La presión atmosférica está baja en el Mar de China al sur de Hongkong.
Día 4, 11.55 a. m.: La presión atmosférica está baja en el Mar de China en los alrededores de Paracels.
Día 5, 11.50 a. m.: Hay un tifón en el Golfo de Tongking, al SW de Hainán, moviéndose al WNW.

Esta depresión se formó, según parece, del 2 al 3 de Julio cerca del banco de Macclesfield. La tarde del día 4 pasaba por el norte y no muy lejos del vapor *Nanshan* que en viaje de Saigón á Hongkong se hallaba entonces al W de las islas Paracels. La mañana del 5 demoraba el centro de la depresión en la región meridional del Golfo de Tongking, y la tarde del mismo día penetraba en Indochina no lejos del paralelo 19° latitud N.

Del Observatorio de Hongkong recibimos estos avisos de tifón:

Día 4, 7 p. m.: Tifón cerca de Paracels; dirección desconocida.
Día 5, 11 a. m.: Tifón en Hainán moviéndose al WNW.

El Observatorio de Zikawei anunció también esta depresión á las estaciones de la costa de China con estos telegramas:

Día 4, 9 p. m.: Tifón al S del banco de Macclesfield moviéndose al NW.
Día 5, mediodía: Tifón en Paracels moviéndose al NW.
Día 5, 9 p. m.: Tifón en el Golfo de Tongking, moviéndose al NW.

Del Observatorio de Phulien, Indochina, son las siguientes notas que tomamos de los reports recibidos de aquel Observatorio:

Día 4, mediodía: Una depresión ciclónica se forma en el Mar de China. Á ella obedecen ya los vientos en la costa. Su zona central, todavía dilatada y poco profunda, se encuentra en las proximidades del sur de Paracels.

Día 5, 12.10 p. m.: La depresión ciclónica anunciada ayer se ha movido al NW prolongando lluvias copiosas en toda la región del Golfo de Tongking. Su centro, poco profundo, se halla actualmente en Hainán y se dirige al WNW.

Día 6, mediodía: La depresión demora ahora en el SW de Tongking donde tiende á rellenarse.

TIFÓN DE 12 Á 21 DE JULIO, 1910.

Para que mejor se vea el origen de este tifón damos en el texto inglés las observaciones hechas en la estación de Santo Domingo, Islas Batanes, desde la tarde del día 12, es decir, desde que los vientos se fijaron al WNW. De ellas se puede deducir con bastante claridad que este tifón hubo de formarse, durante los días 12, 13 y 14, al este de las Islas Batanes ó del canal de Balintang. También parece probable que permaneció estacionario bastante tiempo, sin dar apenas señales de movimiento de traslación hasta el 16. Prueba de ello es el que el observador de Santo Domingo, habiendo hecho observaciones extraordinarias el día 14, se contentó el día 15 con las ordinarias de 6 a. m. y 2 p. m. sin duda por ver que el barómetro se conservaba á la misma altura que el día anterior.

El Observatorio de Manila envió el día 14 este aviso de tifón á Tokio, Zikawei, Taihoku, Hongkong y Phulien:

Día 14, 11.40 a. m.: Un área de baja presión se extiende desde el Mar de China hasta el Pacífico á través de la parte norte de Luzón y del canal de Balintang. Es probable se desarrolle más tarde un verdadero tifón.

El mismo día 14 envió el Observatorio de Zikawei sus primeros anuncios de este tifón á las estaciones de la costa de China en estos términos:

Día 14, mediodía: Tifón lejos al este de Filipinas; dirección desconocida.
Día 14, 3.15 p. m.: Tifón al sur de las Islas Loochoos moviéndose al NW.

Con todo, somos de parecer que, no poseyendo las observaciones de Santo Domingo, fué del todo imposible hasta la tarde del 16 asegurar con certeza la existencia de un verdadero tifón en el Pacífico. Y en hecho de verdad el mismo Observatorio de Zikawei al situar en el mapa del tiempo de 6 a. m. del 15 el supuesto tifón al sur de Loochoos no usó todavía la palabra "tifón" sino únicamente "minimum" y aun esto con el signo de interrogante.

He ahí los telegramas que se cruzaron entre Manila y Hongkong los días 16 y 17.

Manila.—Día 16, 5 p. m.: Tifón al SE de Formosa; dirección desconocida.
Día 17, 12.30 p. m.: Tifón al E de Formosa, moviéndose al WNW ó NW.
Día 17, 4 p. m.: Tifón en, ó cerca de, Formosa, moviéndose al WNW.
Hongkong.—Día 16, 6.45 p. m.: Tifón al E del Canal de Bashi; dirección desconocida.
Día 17, mediodía: Tifón al E de Formosa, moviéndose al WNW.

Del Observatorio de Zikawei son los siguientes avisos de tifón trasmitidos á las estaciones de la costa de China:

Día 16, 4.30 p. m.: Tifón al S de Meiacosima, moviéndose al NW.
Día 17, 10 a. m.: Tifón al E de Formosa, moviéndose al NW.
Día 17, 4.15 p. m.: Tifón en Formosa, moviéndose al NW.

Como podrán ver nuestros lectores en la trayectoria que damos en la lámina IV, se movió este tifón al NW próximamente durante los días 16 y 17. El 18 empezó á inclinarse al N habiendo penetrado en el Continente la mañana de dicho día por los alrededores del meridiano 120° longitud E y cerca de 27° latitud N.

La trayectoria ulterior de este tifón desde que entró en el Continente la describe el Observatorio de Zikawei en estos términos:

En tierra avanzó el centro con velocidad creciente. Una mínima muy pronunciada se registró en Zikawei el 19 á 4.40 a. m. El centro pasaba entonces por el W de Shanghai; dos horas más tarde pasó por el E de Chinkiang; á las 3 p. m. se hallaba en el Mar Amarillo á mitad de camino entre Shanghai y Tsingtau inclinándose más y más al NE. Tocó la costa de Korea no lejos de Chemulpo, se halló cerca de Yuensan, en el mar, á 6 a. m. del 20, y á la misma hora del 21 llegó á los alrededores del estrecho de La Perouse."

Entre Manila y Hongkong se cruzaron estos telegramas el día 18:

Manila.—Día 18, 9.30 a. m.: Tifón en, ó cerca de, la parte norte del canal de Formosa, moviéndose al NW ó NNW.

Hongkong.—Día 18, 11 a. m.: Tifón al N del canal de Formosa, moviéndose al NW.

El Observatorio de Zikawei fué siguiendo la trayectoria de este tifón desde el 18 al 20 con estos avisos de tifón trasmitidos á las estaciones de la costa de China:

Día 18, 8.35 a. m.: Tifón en frente de Turnabout, moviéndose al NW.
Día 18, 11.30 a. m.: Tifón en frente de Foochow, moviéndose al NW.
Día 18, 3 p. m.: Tifón en frente del faro Tungyung, moviéndose al NNW.
Día 18, 4.45 p. m.: Tifón en la costa de Chekiang, moviéndose al N.
Día 19, 7.50 a. m.: Tifón al NW de Shanghai, moviéndose al N.
Día 19, 11.20 a. m.: Tifón al SE de Tsingtau, moviéndose al NNE.
Día 20, 10 a. m.: Tifón al E de Korea, moviéndose al NE.

DEPRESIÓN DE 18 Á 21 DE JULIO, 1910.

Poquísimos son los datos que tenemos sobre esta depresión. Sólo podemos decir que nuestros mapas del tiempo la indicaban en el Mar de Sulu el día 19 y en el Mar de China al W de Palawan el día 20. Además, las observaciones de Indochina de la tarde del 21 dieron algunos indicios de depresión hacia el sur.

El Observatorio de Manila envió á los demás Observatorios del Extremo Oriente estos telegramas:

Día 19, 4 p. m.: Existe una depresión en el mar de Sulu. Es probable se convierta en un tifón.
Día 20, 4 p. m.: Tifón al W de Palawan, moviéndose al W ó WNW.

TIFÓN DE 23 DE JULIO Á 2 DE AGOSTO, 1910.

Este tifón parece haber tenido su origen del 22 al 23 al NE de las Islas Ladrones ó Marianas. Las observaciones recibidas de Chichijima y de Guam, estaciones situadas respectivamente al norte y sur de la primera parte de la trayectoria de este baguio, sirvieron al Observatorio de Manila para enviar este primer aviso de tifón el día 23:

Día 23, 10.55 a. m.: Tifón en, ó cerca de, la parte norte de las Islas Ladrones ó Marianas, moviéndose al W.

En el texto inglés reunimos en una tabla las mencionadas observaciones de Chichijima y Guam. Los vientos observados en la primera de estas estaciones dan lugar á sospechar si además del centro principal de que vamos á hablar y cuya trayectoria damos en la lámina IV, hubo otro centro secundario que recurvó al este de las Islas Bonins.

Véanse á continuación los telegramas que con motivo de este tifón envió el Observatorio de Manila á los demás centros Meteorológicos del Extremo Oriente desde el día 25 hasta el 29 inclusive:

Día 25, 4 p. m.: Tifón en el Océano Pacífico, á la mitad de camino entre las Islas Marianas y Liukiu, moviéndose al WNW.
Día 27, 10.50 a. m.: Tifón al E de Naha (Islas Liukiu) moviéndose al NW.
Día 28, 10.35 a. m.: Tifón al NE de Naha (Islas Liukiu) moviéndose al NW.
Día 29, 11.30 a. m.: Tifón al NW de Naha (Islas Liukiu) moviéndose al W.

El Observatorio de Hongkong nos favoreció á la vez con estos telegramas:

Día 27, 11.30 a. m.: Tifón al E de Loochoos, moviéndose al NW.
Día 28, 10 a. m.: Tifón cerca de Loochoos, moviéndose al WNW.
Día 30, 11 a. m.: Tifón al S de Ningpo, moviéndose al W.

El Observatorio de Zikawei envió á las estaciones de la costa de China estos avisos de tifón desde el 23 al 31 de Julio:

Día 23, 10 a. m.: Tifón entre Marianas y Bonins, moviéndose al NW.
Día 23, 4.30 p. m.: Tifón al SE de Loochoos, moviéndose al WNW.
Día 24, mediodía: Tifón al SE de Loochoos, moviéndose al NW.
Día 25, 10 a. m.: Tifón al SE de Loochoos, moviéndose al NW.
Día 26, 10 a. m.: Tifón al SE de Loochoos, moviéndose al NW.
Día 27, 10 a. m.: Tifón al E de Loochoos, moviéndose al NNW.
Día 28. 9.45 a. m.: Tifón en Loochoos, maviéndose al NW.
Día 28, 5.10 p. m.: Tifón al W de Loochoos, moviéndose al NW.

Día 29, 1 p. m.: Tifón al NW de Loochoos, moviéndose al NW.
Día 29, 4.30 p. m.: Tifón al NW de Loochoos, moviéndose al W.
Día 30, 8.20 a. m.: Tifón al NW de Loochoos, moviéndose al WNW.
Día 30, 11 a. m.: Tifón al SE del faro Hiesan, moviéndose al WNW.
Día 30, 4 p. m.: Tifón en la costa de Chekiang, moviéndose al NW.
Día 31, 8.20 a. m.: Tifón al W de Shanghai, moviéndose al NW.
Día 31, 10.30 a. m.: Tifón al W de Shanghai, recurvando.
Día 31, 4.25 p. m.: Tifón al NW de Shanghai, moviéndose al NNW.

El mismo Observatorio de Zikawei ha publicado algunos datos referentes á este tifón, de los cuales hemos tomado la tabla que va en el texto inglés con las observaciones de los vapores *Hanyang, Yung-chow* y *Hsingkong.* Los tres se hallaron cerca del vórtice: dos al norte de la trayectoria y uno al sur. Estas observaciones nos han servido admirablemente para precisar el punto por donde penetró el vórtice en el Continente la mañana del 30. Además, el hecho de que en Ningpo, donde se hallaba el vapor *Yung-chow* tuvo lugar la mínima barométrica á 2 p. m. del 30 cuando los vientos eran aún del NNE, y que éstos sólo rolaron al ENE á 3 p. m. y no se declarasen francamente del E hasta después de 6 p. m., nos ha movido á suponer en nuestra trayectoria que al penetrar el baguio en el Continente y durante toda la tarde y noche del 30, se movía al W, sin ninguna inclinación al N. Confirma esto mismo el haber pasado á la menor distancia de Shanghai á las 5 p. m. del mismo día 30, cuando los vientos en Ningpo eran aún del ENE. Esta inclinación tan marcada al W de la trayectoria de este tifón durante todo el día 30, está enteramente conforme con los mapas diarios del tiempo del Observatorio de Zikawei. Sólo después de 6 a. m. del 31 cambió el baguio su dirección para moverse al NW y NNW, viniendo á hallarse al W de Shanghai, aunque bastante lejos, á 6 a. m. del 1.º de Agosto.

DEPRESIÓN Ó TIFÓN DE 27 Á 31 DE JULIO, 1910.

Terminamos estas notas haciendo mención de la última depresión ó tifón de este mes, el cual únicamente pudo ser anunciado por el Observatorio de Manila, gracias á las observaciones recibidas de nuestra estación de Guam. En el texto inglés podrán ver nuestros lectores las observaciones hechas en aquella estación y por ellas comprenderán el fundamento que tuvimos para el siguiente aviso de tifón enviado á Tokio, Zikawei, Taihoku, Hongkong y Phulien:

Día 28, 10.35 a. m.: Tifón en, ó cerca de, la parte norte de las Islas Ladrones ó Marianas; dirección desconocida.

Según todas las probabilidades, este tifón hubo de deshacerse el 31 de Julio en los alrededores del norte de las Islas Ladrones ó Marianas.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	757.59	25.1	29.7	23.5	29.1	29.1	29.6	29.5	29	28.6	91.9	21.7	0.5	0.8
2	57.50	25.2	31	23	28.3	29	29.2	29.3	29	28.5	90.6	21.5	1.1	1.2
3	57.65	26.2	31.9	23	28.2	29.8	29	29.2	29	28.3	85.4	21.4	2.7	2.2
4	57.82	26.6	31.3	22.9	28.7	29.8	29.1	29.3	29	28.7	84	21.7	2.5	2.1
5	59.51	27.4	33	24.1	29	30.2	29.3	29.5	29	28.6	82.7	22.1	3.2	2.5
6	60.39	27	33.3	23.1	29.3	30.2	29.5	29.7	29	28.7	82.9	21.7	2.7	2.1
7	60.27	26.9	33.7	21.8	29.4	30.6	29.6	29.7	29.1	28.7	82	21.3	3.4	2.7
8	59.56	26.2	32.2	21.6	28.7	30.1	29.5	29.6	29	28.6	84.3	21.2	3.4	2.5
9	58.47	27.6	31.9	23.5	29.3	30.7	29.5	29.7	29	28.6	81.4	22.1	4.2	3
10	58.31	28.1	32.1	24.8	29.7	30.8	29.7	29.8	29	28.7	79.1	22.2	5.3	3.9
11	58.11	28.5	32.1	24.8	29.9	31.1	29.9	30	29	28.7	78.4	22.6	4.8	3.6
12	57.79	27.2	32.8	23.3	29.8	31	29.9	30	29	28.6	82.2	21.8	3.9	3
13	56.55	26.5	32.7	23.1	29.7	30.5	29.9	30	29	28.6	83.8	21.4	2.9	2.3
14	55.35	26.6	31	24.1	29.5	29.7	29.8	29.8	29	28.6	83.2	21.4	1.7	2.2
15	55.99	25.6	30.3	23.6	28.7	29.5	29.4	29.4	29	28.6	86.3	21	1.6	1.7
16	56.65	24.2	28.7	22	28.7	28.2	29.2	28.9	29	28.5	90.8	20.3	0	.8
17	57.60	24.7	28.7	21.9	26.9	27.6	28.5	28.6	28.9	28.3	89.6	20.8	.2	1
18	58.11	26.6	32.7	22.4	27.3	28.9	28.3	28.4	29	28.6	83.5	21.4	2.4	1.8
19	57.41	26.9	33.2	22.2	28.2	29.6	28.7	28.8	29	28.7	80.8	21	3.2	2.5
20	58	24.8	27.7	23.1	28.7	28.9	28.8	28.9	29	28.5	87.8	20.4	.4	1
21	59.64	26.2	32.8	22.3	28	29.2	28.6	28.9	28.9	28.6	86	21.6	2.5	2
22	59.17	26.3	32.2	22.8	28.8	29.7	28.9	29.1	29	28.7	86.6	21.8	1.5	1.4
23	57.34	26.1	31.9	22.8	28.7	29.4	28.9	29	28.9	28.7	88.7	22.1	1.9	1.4
24	56.24	27.3	33.6	22.7	28.4	30	28.9	29	28.9	28.4	80.5	21.4	3.7	2.7
25	56.30	27.4	34	23	29.1	30.7	29.1	29.3	28.9	28.7	83.2	22.4	3.5	2.4
26	57.24	27.8	33.5	23.3	29.5	30.9	29.4	29.6	28.9	28.7	78.9	21.5	3.9	3.1
27	57.43	27.8	33	23.6	29.8	31.1	29.6	29.8	28.9	28.8	80.7	22.2	3.4	2.6
28	56.87	27.6	32.2	23.7	29.8	31.1	29.7	29.8	28.9	28.8	82.3	22.4	3.5	2.7
29	56.33	27.8	32.9	23.4	29.7	31.1	29.7	29.8	28.9	28.7	81.3	22.4	4.5	3.3
30	57	28.1	32.5	24.5	29.9	31.2	29.8	30	28.9	28.7	80.2	22.5	3.8	3.1
31	58.20	26.8	31.8	23.5	29.6	30.2	29.8	29.8	28.8	28.6	83.5	21.7	3.1	2.4
Mean	757.75	26.7	31.9	23.1	29	30	29.3	29.4	29	28.6	84	21.6	2.8	2.3
Total													85.4	70
Departure from normal	+0.41	—0.4	+1.1	—0.6							—0.7	—0.8		

Date.	Wind.				Clouds.			Sunshine.		Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction. Upper.	Lower.				
		Km.	*Km.*		*0-10.*			*h.*	*m.*	*mm.*	
1	SE	98.5	13.5	SE, WSW	10		N. SbyW	0	00	32.6	● a. p. ⌐◹° p.
2	SE quad.	118	12	S	9.3	Ci.-S.	Cu.-N. S	2	35	14	≡° a. ● p.
3	ESE, WSW	166.5	25	SW	8.2	Ci.-S.	Cu.,Cu.-N.SSW,SEbyS	5	55	-------	≡° ○° a. d ⌐◹ p.
4	WSW	139.5	13	SW	8	Ci.-S. NNW	Cu. SW	2	55	-------	≡° a. ⌐◹ d ◺ p.
5	SW quad.	94.5	16	WSW	8.8	Ci.-S.	Cu. SE	3	10	.6	● ≡° a. ⌐◹° p.
6	SSE	99.5	14	NW	5.8	Ci.	Cu. SE	7	20	-------	≡° a. ⌐◹ p.
7	W quad.	220.5	23	NNE	5.5	Ci.	Cu. SE quad	9	05	38.9	≡° a. ⌐◹² p² p.
8	SW quad.	212.5	26	SW	5.2	Ci.	Cu. E	7	45	-------	≡° a. ⌐◹ p.
9	WSW	382.5	31	WSW	5.2	A.-Cu. NW	Cu. WSW	8	55	-------	≡° a.
10	WSW	435.5	31	WSW	4.7	Ci.	Cu. WSW	8	45	.9	●° a.
11	SW quad.	375.5	29	SWbyW	6.1	Ci.	Cu. W quad	9	10	-------	≡° a.
12	W quad.	259	33	WSW	8.2	Ci.-S.	Cu. WbyN	6	20	.5	≡° a. ●° p.○² a.p.
13	W quad.	201	28	W	8.9	Ci.-S.	Cu. WNW	3	05	-------	d° a. p. ┬° ⌐◹° p.
14	WSW	346.5	33	WSW	9.5	Ci.-S.	Cu.-N. W	1	15	6.4	≡° a p. ⌐◹ p.
15	NNE, WSW	163	17.5	NWbyN	9.8	A.-Cu. NW	Cu.-N. WSW	1	30	1.8	≡d° a. ● p.
16	SW quad.	218.5	33	WSW	10	Ci.-S.	N. SW	0	00	61.4	≡° ↙° a ● a. p.
17	WNW	229.5	22	NNW	10	Ci.-S.	Cu.-N. WSW	0	45	25.6	● a. p. ○ a. ∪ p.
18	Variable	61	9	NW	9.7	Ci.-S.	Cu. S	4	20	-------	≡° a. ○ a. p.
19	W	116.5	13	W, SE	5.2	Ci.-S.	Cu. E	9	20	-------	≡° a. ⌐◹° d° p.
20	N	83.5	11	NNE	10	Ci.-S.	S.-Cu. E quad	0	00	2.8	≡° ● a.
21	WNW	108	19	NW	7.3	Ci.-S. ENE	Cu. SE quad	5	10	1.8	≡° a. ○ a. p. p° p.
22	Variable	56.5	8	NNW	7.1	Ci.-S. SSE	Cu., Cu.-N, E	4	30	4.5	≡° a. ⌐◹ ● p.
23	ENE, WNW	97	15.5	NNW	7.8	Ci.	Cu. ESE	5	30	-------	≡° a.
24	WSW	102	11	WSW	5.8	Ci.	Cu. EbyS	9	45	-------	∩ ≡ a. ┬ ◺ p.
25	W	115.5	14	W	4.3	Ci. NEbyN	Cu. NE	8	30	-------	≡ a. ◺ p.
26	WSW	158	19	WSW	3.2	Ci.	Cu. NE	10	15	1.3	≡° a. ● p.
27	WSW	163.5	18	WSW	4.7	Ci.	Cu. NNE	9	20	-------	≡° a.
28	WSW	210	25	WSW	7.3	Ci. SE	Cu. WbyN	7	05	-------	≡° a. ⌐◹° p.
29	WSW	268	25	WSW	8	Ci.-S. E, N	Cu. NW	8	40	-------	≡° a.
30	WSW	375	35	WSW	8.6	A.-Cu. NWbyW	Cu. WSW	6	55	.6	≡° p° a. d p.
31	WSW	303	41	WbyS	9.2	A.-Cu. WbyS	Cu.	2	25	21.2	●² ≡° a. ↙° ◺ p.
Mean		192.8	21.4		7.5			5	30	-------	
Total								170	15	214.9	
Departure from normal		—77.6			—0.2			+16	34	—174.3	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3]			Relative humidity (mean).[3]	Wind.[3]		Clouds.[3]			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12*	*0–10.*			*mm.*	
1	757.30	27.1	31.9	23.6	79.7	S quad.	1.4	9.2	Ci.-S.	Cu.,N. SW,NNW	1.3	☄° d p.
2	58.17	26.2	30.8	24	81.6	E quad.	2	10	A.-Cu.	Cu.-N.,N. SW,W	6.9	●° p.
3	58.17	27.6	32.2	24.5	77.6	NNE, SE	1.4	9.8	A.-Cu., Ci.-S.	Cu.-N. SW,WNW	------	
4	58.14	27.9	33	25.5	77.2	SE	1.6	8	Ci.-S.	Cu.-N.,Cu. E,SE	------	
5	59.24	27.4	32.2	24.3	78.3	N quad.	1.8	8.4	Ci.-S.	Cu.-N. E, SE	3.8	┬ ● ≤ p.
6	59.75	26.8	32.2	23	81.6	NNE	1.4	6.8	Ci.-S. SE	Cu.-N. E, NNE	1.3	d ┬ ≤ p.
7	59.67	26.8	30.9	24.3	83.4	N quad.	1.4	9.4	A.-Cu.	Cu.-N. E	7.9	d° a. ┬ ≤ d p.
8	59.56	27.4	31.4	23.3	78.6	SE	1.8	7.8	A.-Cu.	Cu.-N. SW	------	
9	58.47	27.9	33.5	25.2	78.2	SE	1.4	4.8	Ci.-S. E	Cu. SW	------	≤ p.
10	58.47	27.9	33.2	24.1	77.4	S quad.	1.4	7.8	Ci.-S. NE	Cu. Variable	------	
11	58.20	27.9	30.9	25.3	75.8	S quad.	1.4	8.2	Ci.-S.	Cu. NNW	------	
12	57.64	28.2	32.6	24.4	73.1	N quad.	1.4	8.8	Ci.-S. SW, NW	Cu.-N. E	------	
13	56.42	28.1	34	25.5	74.2	S quad.	1.8	9.2	Ci.-S. SE, E	Cu. SW	------	
14	55.33	28	32	24.6	73.2	S quad.	2	7.8	Ci.-S NNE, SE	Cu., Cu.-N. SW	------	
15	56.19	28.5	32.6	25.4	73.5	SE	1.6	8.8	Ci.-S.	Cu.-N. SW, E	------	
16	56.80	28.5	32.7	25.9	72.2	SE	2	6.2	Ci.-S. SE	cu.,Cu.-N.SSW,NNE	------	
17	57.55	27.7	32.9	23.6	73.7	S quad.	1.4	7.8	Ci.-S.	Cu.-N. Variable	------	┬ d^c ∪ ≤ p.
18	57.58	28.3	33.6	24	74	S quad.	2	8	Ci.-S. NE	Cu.-N. E	------	∪ p.
19	56.14	28.2	32	23.7	76.8	S quad.	1.4	8.8	Ci.-S.	Cu.-N. E	------	┬ p.
20	56.49	28.2	33.1	24.4	76.4	SE	1.4	7.6	Ci.-S. SW, SE	Cu.-N. E	4.8	●° a. ┬ p.
21	58.07	28.2	35.2	24	74.6	SE	1.2	8.4	Ci.-S. SE, SW	Cu.-N. E	16.3	d° ≤ ⌐⊿² p.
22	57.77	28.3	32.7	22.4	76.8	Variable	1.6	7.6	Ci.-S.	Cu. E	------	● ⌐⊿ ☄° p.
23	56.02	27.6	31.3	23.5	81.3	Variable	1.2	8.2	Ci.-S.	Cu.-N. E, NE	8.4	┬ d° ≤² p.
24	55.98	27.1	30.2	23	80.8	SE	1.4	9.2	Ci.-S.	Cu.-N. NNW	------	● a d° p.
25	56.29	26.9	31.2	24.1	82.1	SE	1.2	9.2	Ci.-S., A.-Cu.	Cu.-N. SW, E	17.8	≤ ● p.
26	56.76	27.6	32.6	24	78.4	SE	1.6	7.2	Ci.-S., A.-S.	Cu. NNE, E	------	≤ p.
27	57.21	28.7	34.4	23.5	77.1	N quad.	1.4	6.4	Ci.-S. E	Cu.-N. E, SW	------	
28	56.74	28.4	33.9	25.1	73.7	SSW	1.2	7.4	Ci.-S.	Cu. SW,NNW	------	≤ p.
29	56.51	28.8	33.2	26.1	75.4	S quad.	2.4	7.2	Ci.-S.	Cu.-N. Cu. SW	------	
30	57.08	28.6	33.6	25.9	72.7	SSW	2	7	Ci.-S. NE	Cu. SSW,SW	------	
31	57.99	28.8	35.2	26.3	71.8	S quad.	2	6.6	Ci.-S. E	Cu. SW	------	
Mean	757.47	27.9	32.6	24.4	76.8		1.6	8				
Total	------	------	------	------	------		------	------	------	------	68.5	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.51	25	30	22.9	------	------	------	------	------	------	40.9	● a. p. d p.
2	58.22	26.7	31	22.9	------	------	------	------	------	------	1	d a.
3	58.05	27.1	31.9	22.8	------	------	------	------	------	------	------	Ω a. ⌐⊿ p.
4	58.47	26.9	31.8	22.7	------	------	------	------	------	------	------	Ω² a.
5	59.25	27	32.2	22.5	------	------	------	------	------	------	------	≡° Ω a. ⌐⊿ p.
6	60.12	26.2	32.1	22.5	------	------	------	------	------	------	3.3	≡° Ω a. p p.
7	60.10	26.7	32	22.4	------	------	------	------	------	------	------	≡° Ω² a. ┬ p.
8	59.84	27.2	32.1	22.4	------	------	------	------	------	------	1.5	Ω² a. p d ≤ p.
9	58.86	27.2	32	22.2	------	------	------	------	------	------	------	≡° Ω a.
10	58.43	27.8	32.8	22.8	------	------	------	------	------	------	------	≡° Ω ⌐⊿ a.
11	------	27	32.9	22.7	------	------	------	------	------	------	------	≡° ┬ a.
12	------	26.8	31.2	22.2	------	------	------	------	------	------	9.1	≡° Ω a. ● p.
13	------	------	------	23.3	------	------	------	------	------	------	2.5	● R.
14	55.72	27.1	31.6	23.6	79.8	SSW	1.2	6	Ci.-S. N	Cu.-N. SW	------	┬ Ω² ≤ ° ● °a. ≤ p.
15	56.67	27.6	32.5	23.9	78.4	S quad.	.8	8.2	Ci.-S. N	Cu.-N. SW, S	------	☄° d° a Ω° p.
16	57.56	26.9	32.2	22.5	82.7	SW quad.	.5	3.7	Ci.-S. NE	Cu. SW	------	Ω² a. ∞ Ω° p.
17	58.12	27.1	31.4	22.9	82.2	NW	.8	4.7	Ci.-S. NE	Cu. S	------	Ω² a. ∞ Ω° p.
18	58.21	27.7	32	23	79.5	E quad.	1.2	3.2	Ci.-S. N	Cu. NE	2.3	≡° Ω² a. ∞ p.
19	57	26.9	30.7	24.3	86	E quad.	1.2	6.5	Ci.-S. NE	Cu.-N. E	2.3	● a. ≤ p.
20	57.53	27.7	32 2	24	77.8	E quad.	1.3	3	Ci., Ci.-S.	Cu., Cu.-N. N	4.6	≤ Ω² a. ∞ p.
21	58.99	27.1	31.5	23.4	84.6	NE quad.	1	6.5	Ci.	Cu. ENE	15	● a p.
22	58.35	27.4	31.4	23.4	86.3	NE quad.	.5	6.2	Ci.	Cu. E	------	●° a. ∞ p.
23	56.61	27	29.8	23.5	86.7	NW	.7	3.3	Ci.-S. EbyN	Cu., Cu.-N.	57.1	Ω² p a. ∞ ┬ ≤ p.
24	56.16	25.8	29.6	22	88.7	W quad.	.7	8.8	Ci.-S. E	Cu.-N.	------	Ω² a. ∞ p.
25	56.40	27	30.8	22.9	83.8	Variable	.7	7	Ci.-S. E	Cu.-N. W	------	Ω² a. ≤ p.
26	57.25	27	30.6	23	84.2	Variable	.7	5.5	Ci.-S. NE	Cu.-N.	------	∪ a.
27	57.55	27.4	32	23.4	82.5	SW quad.	1.2	4.3	Ci. NE	Cu., Cu.-N. W	------	Ω² ≡° a. ∞ Ω° p.
28	57.37	27.3	32	23.6	82.9	W quad.	.8	4.7	Ci.-S., Ci. E	Cu -N. W	3.5	≤² ≡° Ω° a. ∞ ≤² p.
29	56.92	27	32.2	23.8	79	SW quad.	.8	7	Ci.-S. EbyN	Cu.-N. W	------	d² ⁿ. ∞ ≤² p.
30	57.82	27.4	32.5	23.9	79.8	SW quad.	1	6.3	Ci.-S. NE	Cu.-N. W	------	Ω° a. p. ∞ ≤° p.
31	58.48	27.6	32.5	23.1	77.7	SW quad.	.8	3.8	Ci.-S. NE	Cu.-N.	------	Ω² ≡° a. ∞ p.
Mean	57.91	27	31.6	23	82.4		.9	5.5				
Total	------	------	------	------	------	------	------	------	------	------	143.1	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied,—1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.67	25.2	29.6	23.1	79.9	Variable	5.5	7.5	Ci.-S.	Cu., Cu.-N. W	31.7	≡° d a. ⊤ ●² p.
2	58.25	26.4	29.6	23	70.2	SSW	7.1	7.7	Ci.-S., A.-Cu.	Cu.-N. W	-------	≡° ☊ a. ⌐◹ p.
3	58.25	26.9	30.8	23.7	69.3	SE, SW	5	7.3	A.-Cu. N	Cu. SW	.5	≡° ☊ a. ⌐◹ ●² p.
4	58.46	27.3	31.5	24	68	SSW	7.2	5.2	Ci.-S., A.-Cu.	Cu.-N., Cu. SW	-------	☊ a. ⌐◹ p.
5	59.72	27.4	31.5	23.9	69.2	E, SE	5.8	3	Ci.	Cu. SW	2	☊ a. ◟ p.
6	60.22	27	30.1	23.3	70	E	7.4	3.5	Ci.	Cu. E	.5	☊ ●° a. ◟ p.
7	60.12	26.7	30	23.1	70.8	E, ENE	5.1	5.5	Ci.-S.	Cu., Cu.-N. E	8.1	●° a. ⌐◹ a. p.
8	59.98	27	30.2	22.7	68.7	S quad.	7.7	4	Ci.	Cu. SSW	-------	● a. ⌐◹ a. p.
9	58.86	28	31	25.2	67.7	SW quad.	9.2	3.3	Ci.	Cu. SW	-------	☊ a. ◟ p.
10	58.57	27.2	31	23	67.8	Variable	7.8	3	Ci.	Cu. SSW, SW	.5	≡° ☊ a.
11	58.38	27.4	30.8	24.6	67.8	SSW	6.6	7.8	Ci.-S.	Cu.-N. WSW	-------	≡° ●° a. ⌐◹ a. p.
12	57.92	27.6	31	23.5	66.1	SW quad.	7.8	6.8	Ci.-S.	Cu. SW	-------	☊ a. ⌐◹ p.
13	56.77	27.9	31.5	24.8	64.1	SW quad.	7.7	6.3	Ci.-S.	Cu. W, WSW	-------	☊ a. ◟ ⊤ p.
14	55.59	27.7	31	24.9	65.3	SSW	8.4	6	Ci.-S. E	Cu. SW	-------	☊ ◟ a. ⊤ ⊍ p.
15	56.61	27.8	31.3	23.6	64.5	SW quad.	9.6	6.5	Ci.-S.	Cu. WSW	-------	☊ a. ◯ ⊍ p.
16	57.30	26.6	31	22	65.9	SW, S	6.5	3.3	Ci., Ci.-S.	Cu. SW	-------	☊ a. ◯ p.
17	57.95	27.5	32.9	23.2	67.1	SE	6.4	5.5	Ci.-S.	Cu. SW	-------	≡° ◯ a. ◟ ⌣ p.
18	58	27.9	31.5	24.5	65.5	E	9.3	3.8	Ci.	Cu. E	-------	☊ a. ∞ ◟ p.
19	56.85	27.5	31.3	24.4	68.5	E	10.6	4.7	Ci.	Cu. E	25.4	☊ a ● ⌐◹ p.
20	57.25	27.4	30.6	23.9	70.3	NE quad.	7.9	4.2	Ci.	Cu. ESE	-------	≡°● ⌐◹a. ∞ ⊍ p.
21	58.80	28.2	31	25	65.2	NE quad.	9.9	3.5	Ci.	Cu. E	2.5	☊ a ● ⊤ ◟ p.
22	58.23	27.7	31	24.9	69.8	E	7.9	4.2	Ci.	Cu. E, ENE	-------	☊ ◟ a. ⊍ p.
23	56.68	26.5	31	23.3	75.2	Variable	6	4.8	Ci.	Cu.-N. E	23.9	☊ a. ● ⌐◹ ◟ p.
24	56.04	26.5	30.5	23	71.7	W, S	5	6.5	Ci.-S.	Cu., Cu.-N. N	.8	● a. ◯ a. p. ◟
25	56.41	27.2	31	23.2	69.9	E, SE	5.7	5.5	Ci.-S., Ci.	Cu., Cu.-N. ENE	-------	☊ a. ◟ a. p.
26	57.15	27.1	31.3	24	69.3	Variable	5.8	5.3	Ci.-S., Ci.	Cu. E, SW	-------	☊ a. ◟ p.
27	57.55	27.4	31.5	24.3	70.3	Variable	5.9	3.8	Ci.	Cu. SSW	16.8	☊ a. ● ◟ p.
28	57.27	27.5	31.5	24.5	71	Variable	6.7	5	Ci.-S., Ci.	Cu. WSW	.8	≡° ☊ a. ●° ◟ p.
29	56.98	27.3	31	24	67.2	SW	8	5.7	Ci.-S.	Cu. SW, WSW	-------	☊ ◯ a ⌐◹ ◟ a. p.
30	57.62	27.8	31	24	66.8	SSW	7.7	5.2	Ci.-S.	Cu. WSW	-------	☊ a. ⌐◹ ◟ p.
31	58.31	27.7	32.1	23.8	65.9	WSW, SSW	6.9	3.5	Ci.	Cu. SW	-------	☊ a. ⌐◹ p.
Mean	757.86	27.3	31	23.8	68.7	----------	7.2	5.1	----------	----------	-------	
Total	-------	------	------	------	-------	----------	----------	----------	----------	----------	113.5	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.78	26	30	23.4	84	SW, W	7.8	9	Ci.-S.	Cu.	-------	d p.
2	58.28	26.2	29.6	23.4	83.2	SW	11	9.3	Ci.-S., A.-Cu.	Cu. SW, W	-------	d p.
3	58.12	27.6	30.4	24.7	77.1	SW	12.1	8.5	Ci.-S.	Cu. SW	-------	
4	58.25	27.5	30.5	24.8	79.8	SW	13.4	6.3	Ci.	Cu.	-------	
5	59.85	27	31	23.4	80.4	SW	6.2	5.8	Ci., Ci.-S.	Cu.	3.8	● ⌐◹ ◟ p.
6	60.29	26.8	32.5	22.5	78.3	NE	5.5	4.7	Ci.	Cu.	-------	◟ p.
7	60.18	26.9	33	23.4	78	NE quad.	6	7.7	Ci., Ci.-S.	Cu.	4.1	☊ a. ⊤ ● ⌐◹ ◟ p.
8	60.11	25.9	28.9	22.6	84	SW	7.8	7	Ci.-S.	Cu.	21.8	● a.
9	59.10	27	30.4	23.3	78	SW	13.5	2.7	Ci.	Cu. SW	-------	◟ p.
10	58.87	27.5	30.5	23.7	75.6	SW	15.7	4.3	Ci.	Cu.	-------	
11	58.66	27.2	30.8	22.8	76.2	SW	14.3	4.8	Ci.	Cu.	-------	◟ p.
12	58.25	27.5	29.7	23.9	74.3	SW quad.	14.6	7	Ci., Ci.-S.	Cu. SW	-------	⊤ ◟ p.
13	57.02	26.9	29.6	23.5	77	SW	11.5	7	Ci.-S.	Cu.	-------	◟ p.
14	56.08	26.7	29.5	23.8	79.7	SW	17	6.8	Ci.	Cu.	-------	◟ p.
15	56.91	27.7	30.1	25.4	75.2	W	16.2	8.3	Ci.-S.	Cu. SW	-------	⌣° p.
16	57.54	27.8	30.5	24.4	76.8	SW, W	11.7	6.2	Ci.	Cu.	-------	
17	58.23	27.8	30.3	25.3	78.7	SW	8.1	6.8	Ci.	Cu. SW	-------	⊍ p.
18	58.04	27.8	33.4	22.9	71.2	Variable	6.9	5.7	Ci., Ci.-S.	Cu.	-------	☊ ◯° a.
19	56.87	28.3	33.6	24.4	71.6	NE quad.	12.3	4.5	Ci.	Cu.	-------	☊ a. ◟ p.
20	57.21	27.8	34.1	23.5	75.8	N quad.	7.5	6.8	A.-Cu. E	Cu.-N. SE	7.1	☊ a. ⊤ ⌐◹ p.
21	58.88	28.3	33.5	23.4	73.5	NE	9.8	5.8	Ci.	Cu.	.3	◟ a. p. ●° ⌐◹ p.
22	58.35	28.4	32.8	23.9	75	N	11.8	7.3	Ci., A.-Cu. SE	Cu. E	-------	◟ a. p.
23	56.90	26.5	33.5	24.7	85.6	N	6.4	9	A.-Cu. E	Cu.	2.3	◟ a. p. ● ⊤ d p.
24	56.31	26.8	30	24.1	83.5	SW	6.6	8.8	A.-Cu. E	Cu.	.5	◟ a. p. ● a. ⊤ p.
25	56.50	26.7	32.6	23.4	81	Variable	5.7	8	Ci.	Cu. E	-------	⌐◹ ◟ p.
26	57.41	26.7	31.1	23.4	81.2	E, ESE	4.5	8	Ci., Ci.-S.	Cu.	-------	◟ ☊ a. ⊤ p.
27	57.93	27.1	31	22.5	78.3	SW	7.2	6	A.-Cu. E	Cu.	-------	☊ ⌐◹ a.
28	57.50	28.1	31.1	24	77.2	SW	12.3	6	Ci.-S. E	Cu.	-------	☊ ◠ a. ⊤ ◟ p.
29	57.22	27.6	30.4	25.3	78.3	W quad.	13.3	6.5	Ci.-S.	Cu. SW	14.5	◟ a. ● d ◠ ⌐◹ p.
30	57.97	27.2	31	23.3	78.7	SW quad.	13.2	8.5	A.-Cu. E	Cu.	.8	⌐◹ a. d p.
31	58.74	26.8	29.5	23.9	80.8	SW, S	13.2	8.8	A.-Cu.	Cu.-N. SW	1.8	● a. ◟ p.
Mean	758.04	27.2	31.1	23.8	78.3	----------	10.4	6.8	----------	----------	-------	
Total	-------	------	------	------	-------	----------	----------	----------	----------	----------	57	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ—11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied,—1.83 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km.p.h.*	*0–10.*			*mm.*	
1	757.96	24.6	29.1	22.6	90.4	N, NNE	2.8	9.3	A.-Cu. N	Cu.-N.	22.1	●≡° a. p. ⌐◹ p.
2	58.42	25.5	30.1	22	87.8	SSE	2.3	9.5	A.-Cu. W	Cu.-N. W	11.7	≡° a. ⌐◹ p. ● a. p.
3	58.43	26.1	31.2	21	81.5	SE quad.	1.4	9.2	A.-Cu. NW, W	Cu.-N. NW	------	≡° a. ◟ p.
4	58.60	26.3	32.2	22.3	85	S quad.	2.6	5.7	A.-Cu. S	Cu. SSE	------	♌ ≡° a. ┬ ⌐◹ p. ◟
5	59.87	26.4	30.9	21.5	80.4	Variable	2.7	3.7	A.-Cu. SE	Cu.-N. E	------	♌ ≡° ┬ a. ◟ a. p.
6	60.49	25.8	31	21.5	85.3	N, S	2.8	5.3	A.-Cu. SE	Cu.-N., Cu. E	4.3	♌° a. ⌐◹ ◟ d p.
7	60.30	25.2	30.4	21.2	86.2	N quad.	2.6	7.3	Ci.-S. E	Cu.-N. E	2	≡° ● ○ a. ⌐◹ ◟ p.
8	59.98	25.7	30.4	21.8	84	S	2.3	3.7	Ci.-S.	Cu.-N. NE	2.3	♌ ≡° ◠ ⌐◹ ┬ ◟ ●
9	59.06	27.1	30.8	23.6	77.7	SE quad.	3.6	4.7	Ci.-S.	Cu.-N. SW, SE	------	≡° a. ◟ p.
10	58.79	26.6	30.7	21.9	80.6	SE quad.	2.8	4.7	Ci. E	Cu. WSW	------	♌ ≡° a. ◟ p.
11	58.75	25.5	30	22.6	86.7	E quad.	2.6	8	Ci.-S. E	Cu. E	2.6	◟ ⌐◹ a. p. ●° ≡ p.
12	58.21	25.6	30.6	22.1	81.7	N quad.	2.7	7.8	A.-Cu. E	Cu.-N.	1.5	⌐◹ d a. p. ◟ ♋ p.
13	57.10	26	30.2	22.2	81	SE quad.	------	7.8	Ci.-S. E	Cu.-N.	1	≡° d a. ◟ ♋ p.
14	55.86	26.2	30.2	21.9	81.4	N, SSE	6.5	9	Ci.-S. E, NEbyE	Cu.-N. W	50	♌ ≡° ◟ d ⌐◹ ∪ ♋
15	56.77	26.3	30.4	22.1	82.8	NE quad.	5.5	9.5	Ci.-S.	Cu.-N. W	------	⌐◹ ●² ≡° a. ∪ ♋ p.
16	57.53	26.5	30.5	22.2	82.2	SE quad.	7.1	7	Ci.-S.	Cu.-N. SSW	------	♌ ≡° a. ♋ p.
17	58.22	25.6	32.2	20.2	80.8	N, S	4.2	8	Ci.-S. E	Cu.-N. E	------	♌ ≡ ○ a. ∪° ♋° p.
18	58.37	26.2	32.2	20.7	81	Variable	4.7	5.8	Ci.-S. NNE	Cu.,Cu.-N.E,NNE	------	♌ ≡° a. ♋° p.
19	56.96	26.4	33.1	21.9	80.6	N quad.	5.8	7.2	A.-Cu. E	Cu.-N., Cu. E	1	♌ a. ⌐◹ ┬ ◟ p.
20	57.46	27	32.5	22.7	80.3	Variable	5.7	4.8	Ci. E	Cu. E	------	d a. ◟ p.
21	59.02	26.4	33	20.8	80.5	SW quad.	5.6	6.5	Ci.-S. E	Cu. E	13.5	♌ a. ⌐◹ ● ◠ ◟ p.
22	58.26	27.1	32	23.1	84.2	N quad.	5.3	7.7	Ci.-S. E	Cu.-N., Cu. E	------	● ≡° a.
23	56.69	26.2	31.7	22.2	82.8	S quad.	5	6.2	Ci.-S.	Cu. NE, W	12.4	♌ ≡° a. ⌐◹ ◟ ● p.
24	56.27	26.2	30.7	21.9	85.8	Variable	3.9	8.7	Ci.-S. E	Cu.-N. E	------	≡° a. ⌐◹ ◟ p.
25	56.50	26.4	32	22	85	Variable	4.2	6.2	Ci.-S. E	Cu. NNE, ENE	------	♌ ≡° a. ┬ ◠ ◟ p
26	57.47	25.1	30.7	21.9	86.5	N quad.	4.6	7.3	Ci.-S. E	Cu.-N.	------	♌ ≡° . ⌐◹ ◟ p.
27	57.79	26.2	32.1	20.8	82.1	N quad.	4.5	4	Ci. SE	Cu.	------	♌ a. ◟ p.
28	57.46	26	29.6	22.3	87.6	N quad.	3.2	9.2	Ci.-S.	Cu.-N. WbyS	4.8	◠ ⌐◹ a. ⌐◹ ● p.
29	57.08	26.7	30.5	23	82.8	SE quad.	6.9	7.5	Ci.-S. E	Cu.	8.9	≡° ○ a ⌐◹ ● ┬² p.
30	57.93	26.8	31.7	22.9	82.3	SE quad.	6.5	8.2	Ci.-S. E	Cu. SW	------	d ≡° ⌐◹ a. ○ ◟ p.
31	58.51	27	31.8	23	83.2	S quad.	6	4.7	Ci.-S.	Cu. W	13.8	♌ ≡° p. a. ◟ p.
Mean	758.07	26.2	31.1	22	83.2	------	4.2	6.9	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	151.9	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.04	26.1	31.5	23.6	86	NW quad.	0.8	6.8	Ci.-S. NW	Cu. NE, NNE	1.3	♌° ≡° ○° a. ● p.
2	58.48	26.2	30.5	23.5	86.8	Variable	.2	8	A.-Cu., Ci.-S.	Cu.-N. WNW	5.8	● ◟² p.
3	58.75	27	32.4	22.5	82.2	E quad.	.7	6.8	Ci.-S. EbyN	Cu. WNW, NW	1.5	● ┬ p.
4	59.03	27.6	32	23.9	82	SE quad.	1	6.8	Ci.-S. NW	Cu. SSE	------	┬ p.
5	60.41	27.5	31.3	24.4	83	SE quad.	.8	6.8	Ci.-S. NW	Cu. SE	24.4	d° a. ◟ p.
6	61.02	27.5	31.8	23	81.3	SSE	.7	4.8	Ci.-S. NW	Cu. ESE	.5	●² a. ●° p. ◠ a. p.
7	60.89	26.8	31	23.6	85.5	WNW, SE	.5	7.5	Ci.-S. NW	Cu. ESE	8.6	● a. p. ◠ a. ◟ p.
8	60.28	26.4	31.5	22.8	86.8	S quad.	.7	6	Ci.-S.	Cu.-N. ESE	.3	d ◠ ●° p.
9	59.31	27.6	32.8	22.3	82.5	ESE	.5	3.8	Ci., Ci.-S.	Fr.-Cu. W	------	♌² a.
10	59.03	27.5	32.4	23.6	84.5	ESE	.2	7.3	Ci.	Cu. W	3	♌² a. ● ◟² p.
11	58.93	26.2	31.3	24.2	87.8	Variable	.3	9	------	N., Cu.-N. WNW	2.5	┬ a. p. ● p.
12	58.35	26.6	32.7	22.4	80.7	NW	.7	8.3	Ci.-Cu.	Cu., Cu.-N. NW	------	◟ d° a.
13	57.23	27.5	31.8	25	76.2	NW	1	8.5	Ci., Ci.-S. N	Cu.-N. WNW	------	○² p.
14	56.05	27.1	32	23.4	85.7	Variable	1	8.2	Ci.-S. NNE	Cu.-N. WNW	14.5	○² a. ● ┬ ◟² p.
15	57.10	26	29.2	23.3	88.7	NW	.8	8.8	Ci.-Cu., Ci.-S.	Cu.-N. NWquad.	9.6	● a. p. ◟ a.
16	57.77	27	32.6	22.8	82.2	SE quad.	.8	6.3	Ci. SE, ESE	Cu. SW	------	≡° ♌² a. ○² a. p.
17	58.72	27.7	32.8	24.2	82.8	SE quad.	.7	7	Ci. N	Cu. SSW	------	♌² a. ○² a. p. ∪² ♋²
18	58.94	28	32.1	24.4	80.2	S quad.	.7	6.2	Ci. NNE	Cu. SSE	------	
19	57.65	27.8	33	23.8	80.2	NE quad.	.7	4.3	Ci.-S. NW	Cu. ESE, SE	1.5	♌² a. ┬ p.
20	58.25	27.8	31.6	24	80.3	SSE	1.2	5.5	Ci.-S. NW	Fr.-Cu. SE	------	● ┬ a.
21	59.70	28	33	24.8	80	Variable	1	5.3	Ci. NW	Cu. E	2.5	d° p.
22	59.18	26.7	31.5	23.8	87.2	NW quad.	.2	7.2	Ci.-S. NW	Cu., Cu.-N. ENE	23.6	○² ● d a. ●² ⌐◹² p.
23	57.23	27.8	34.4	24.8	83.7	WNW	.7	4.5	Ci.	Cu. E	11.7	● ⌐◹² ∪² p.
24	56.39	27.7	33.8	24.6	84.7	Variable	.7	7.3	Ci.-S. NW	Cu. ENE	10.7	♋² a. ● ⌐◹² p.
25	56.87	26.6	34	22.7	85	W quad.	.8	5.2	Ci.	Cu. ENE	4.1	≡ ♌° a. ● ┬ p.
26	57.82	26.6	32.5	22.7	84 8	WNW	1	6.3	Ci.-S. NW	Cu., Cu.-N. E	4.8	● p.
27	58.02	27.9	33.5	23.4	80.6	ENE, NNW	.8	4.7	Ci.-S.	Cu. ENE	------	∪° ♋° ♌²
28	57.76	27.4	33.1	23.8	84.2	W quad.	.5	6	Ci.-S. E	Cu.,Cu.-N.W,NE	.8	♌² a. d° ┬ ◟² p.
29	57.27	27.6	33.3	23.8	83	SE quad.	.8	7.5	Ci.-S. SSW	Cu. WNW	17.8	●°a ●° ◠ ⌐◹² ◟² p.
30	58.07	27.4	33	24	85.7	Variable	.5	7.3	Ci.-S. E	Cu.-N. SW	6.4	● ⌐◹ a. p.
31	58.87	26.6	33.4	23.3	85.8	ENE	.2	4.3	Ci., Ci.-S.	Cu. WSW	8.4	♌² a. ● ⌐◹ p.
Mean	758.43	27.2	32.3	23.6	83.6	------	.7	6.5	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	164.3	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.[1]	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11	758.76	27.2	31.9	24.7	77.8	NE	1	7.8	Ci. SE	Cu. S		⊤ ↘ p.
12	58.25	27	30.7	24.2	79.8	SE	.6	9	Ci.-S. NE	S.-Cu. S		↘ a. p.
13	57.13	27.4	31.2	24.1	77.1	NW	.5	9.3	A.-S. SW, NW	N. NW		↘ a. p.
14	55.92	27.4	32	24.2	80.2	S quad.	.8	8	Ci.-S. Variable	S.-cu., cu.-N.S, SW		⊤ ↘ ⊽ ∪ p.
15	56.86	27	31.8	24.3	77.6	SE	1	9.8	A.-S. SW	S.-Cu. SW		● ⌐↘ ⌒² ⊽ ∪ p.
16	57.02	28.3	32.9	24.8	73	SE	1.2	6.5	Ci.-Cu. SW	S.-Cu. SW		⊕ ○ a. ⊽ ∪ p.
17	58.23	28	32	23.8	77.7	SW, NE	.7	8.5	A.-S. SW	S.-Cu. SW		⊕ ○ a. p. ⊽ ∪ p.
18	58.43	27.8	31.5	24.3	80.5	NE	.7	7	Variable	N.-cf., Cu. NE, E		
19	57.50	27.8	31.5	24.2	79.7	E, NW	1.2	6.5	Ci.-S. E	Cu. E		●° a. ⊤° ↘ ⊽ p.
20	57.79	27.5	30.5	24.2	84.6	NE	.7	8	Ci.-S.	Variable NE		● a. ↘ a. p.
21	59.52	28.4	31.2	24	80.5	NE	.8	6.6	Ci. NE	Variable E quad.		● ↘ a. p. ⌐↘ p.
22	58.79	29.1	31.9	25.6	78.2	NE	1.6	8.5	Ci.	Cu. NE		●° a. ⌐↘ ↘ p.
23	57.28	28.4	30.8	24.2	82.7	N quad.	.8	7.7	Ci.-S., Ci. NE, N	Variable NE, N		● ↘ a. p.
24	56.61	28	30.6	24.1	82.8	NE, NW	.8	8.6	Ci.-S.	N. NE		●° a. ● ⌐↘ p. ↘
25	56.74	27.6	31.2	24	82.6	N quad.	.8	7	Ci.	S.-Cu. NE		● a. ↘ a. p.
26	57.55	27.7	31.4	24.2	81.2	N quad.	.8	8	Ci.-S.	S.-Cu., N. N, NE		↘ ⊤ a. d° ⊕ ○ p.
27	57.94	27.7	31.5	24.2	78	NE	1	5.2	Ci. NE	S.-Cu. NE		☊ a. ⊤° p.
28	57.45	27.8	32	24.1	81.3	NW, NE	1	6.8	Ci.-S. NE	Cu.-N. S, NE		☊ ⊕ ○ a. ⊤° ↘ p.
29	56.90	28.3	32.2	24.7	78.2	Variable	1.2	6.5	Ci. SW, E	S.-Cu. SW		↘ a. p. ⌐↘ p.
30	57.53	27.6	32	24.9	81.7	SW quad.	1.5	7	Ci., Ci.-S. S quad.	S.-Cu. SW		☊ ⊕ ○ ↘ ●² ⊤ ⌒
31	58.76	27.2	31.5	23.7	82.2	S quad.	1.2	6	Ci., Ci.-S.	N. SW		☊ ⊽ a. ⌐↘ ● ↘ p.
Mean	757.66	27.8	31.5	24.3	79.9		.9	7.5				
Total												

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.96	25.1	29.5	23.1	91.5	N	1	7.3	Ci.-S., A.-Cu.	S.-Cu., N. S, WNW	48	● d a. p.
2	58.35	26.1	31.4	23.2	87.3	W quad.	1.2	9.2	A.-Cu.	S.-Cu. W	30.5	d° a. ● ↘ p.
3	58.54	26.5	30.9	22.3	84.8	SW	1.5	8.7	A.-Cu.	S.-Cu. W	1	↘ d p.
4	58.68	26.6	31.1	23.3	86	N, SW	1	6.2	Ci. NE	S.-Cu. S		d ↘ p.
5	60.26	26.9	32.1	22.9	83.9	N	1.2	3.3	A.-Cu.	S.-Cu. SSW		☊ a. ⌒° ↘ p.
6	60.78	26.5	32.6	22.7	85.3	N	1	2	Ci.-S.	Cu., S.-Cu.	3.6	p ⊤ ↘ p.
7	60.65	25.7	30.5	22.3	90	N	.8	4.8	Ci.-S. SE, ESE	S.-Cu. E	1	↘ ☊ a. d ↘ p.
8	60.08	27	32.2	22.9	82.3	SW	1.3	4.3	A.-Cu. SE	Cu. SW		↘ a. p.
9	59.10	27.9	34	23.3	79.3	SW	1	3.3	Ci.-S., Ci.	S.-Cu. SW		
10	58.96	27.3	32.6	23	81.7	N, SW	1.3	4.5	Ci.-S.	S.-Cu. W		↘ p.
11	58.60	26.2	32.8	23.8	87.5	SW, NNW	1.2	8.3	A.-Cu. NNW	S.-Cu. W	6.4	⌐↘ d ⌒ ↘ p.
12	58.01	25.6	30.9	23.2	88	NW quad.	.8	7.8	A.-Cu.	S.-Cu. W	30.5	d ⊤ a. ∪ ↘ p. ●
13	56.94	25.5	29.3	22.5	90.2	W quad.	.7	10	A.-Cu.	S.-Cu. W	7.6	● d a. p ↘ p.
14	55.56	26.7	31.3	23.1	83.5	W quad.	2.2	9.2	A.-Cu.	S.-Cu. W	36.4	↘ d ● p.
15	56.66	25.5	28	22.7	89.1	WNW, SW	1	10	Ci.-S.	N.S.-cu. W quad.	10.7	● ⊤ a.
16	57.42	28.4	31.7	25.3	78	SW	2	8	Ci. NE	S.-Cu. SW		⊽ p.
17	58.49	27.4	31.5	23.4	81.7	S	.5	6.2	Ci. N	S.-Cu. SW		○ a. ∪ p.
18	58.95	26.7	31.9	22.8	83.3	N	1.2	5.2	Ci.-S.	Variable E		⊤ ↘ ⊽ p.
19	57.79	25.5	32.5	22.2	87.2	Variable	.7	4.7	Ci.-S.	Cu. E	5.3	☊ a. ●° ⌐↘ ⊽ ∪ p.
20	58.07	26.6	32.1	22.7	84.8	N	1	4.2	Ci.-S.	S.-Cu. E		☊ a. ⊤ ↘ p.
21	59.63	26	32.6	22.5	88.3	N, NE	1	4.5	A.-Cu.	Cu., S.-Cu. E	13.5	☊ a. ● ⊤ ↘ p.
22	59.05	26.1	29.9	23.9	90.3	N	.7	7.8	Ci.-S. SE	S.-Cu. E	3.6	●° ↘ ⌐↘ p.
23	57.23	26.4	31	23.2	86.8	N quad.	.8	5	Ci., Ci.-S.	S.-Cu. NE	7.6	● ⊤ d ↘ p.
24	56.40	26.8	32.9	22.8	85.5	Variable	.8	5	Ci. ESE	S.-Cu. NE		↘ a ⊤ d ↘ p.
25	56.79	26	31.5	22.9	88.3	Variable	.7	5	Ci.-S.	S.-Cu. NE	10.7	⊽ ≡ ⌐↘ ● ⌒ ∪
26	57.71	25.7	32.1	21.8	85.8	N	1.2	3.5	Ci. ESE	Fr.-Cu. NE	1	☊ a. d ⌒° p.
27	58.10	26.5	31.9	21.5	83	N, SW	1.2	2.2	A.-Cu.	Cu.		↘ p.
28	57.45	27.6	33.5	23.7	82.8	N, SW	1.3	3.2	A.-Cu. NW	S.-cf. W		↘ p.
29	57	28.9	32.4	24.6	77.6	SW	2.5	3.5	Ci.-S. E	S.-cf. W		↘ p.
30	57.80	29.1	33.2	25	75.5	SW	2.3	5.2	Ci.-S. ESE	S.-cf. WSW		↘ p.
31	58.69	28.5	33.9	23.9	78.2	SW	2	5	Ci.-S.	S.-Cu. W		↘ p.
Mean	758.25	26.7	31.7	23.1	84.8		1.2	5.7				
Total											217.4	

[1] No rain-gauge.

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.71	26	29.4	23.7	84.5	E,W	1.8	7.8	Ci.-S.	Cu.-N.	-----	d° a.
2	57.87	25.6	32	22.6	87.3	SW	1.8	8	A.-Cu. SSE	Cu. W	23.3	● d p.
3	57.80	26.3	33	23.5	85	WSW	2.8	7.3	Ci.-S.	Cu.-N. SW	12.7	☇ ● p.
4	58.34	26.8	32.6	23.4	85	SW	3	6.8	Ci. Ci.-S.	Cu.-N. S	12.7	● ⊓☇ p.
5	59.93	27.2	32.4	23.4	83.3	ESE	2.4	3.5	A.-Cu.	Cu.-N. S	------	⊓☇ d° p.
6	60.54	27.6	32.1	22.9	79	ENE	4.2	.5	Ci.	Cu.	------	☇° p.
7	60.30	27.6	32.1	23.9	80.1	E	2.4	3.2	Ci.	Cu.-N. E	------	☇° p.
8	59.59	27.5	33.6	23.1	79.8	SW	2.5	4	Ci.	Cu. S, SW	------	☇ p.
9	58.42	28.1	34	23.1	75	WSW	3.4	2.7	Ci.	Cu. SW	------	☇ p.
10	58.17	28.8	34.7	23.6	72.2	SW, W	3.6	2	Ci.	Cu. WSW	------	☇° p.
11	57.86	28.4	34.2	25	75.9	W	3.5	5.3	Ci.-S.	Cu. W	------	d° ☇ p.
12	57.64	25.6	32.3	23	85.2	W quad.	4.2	9.7	Ci.-S.	Cu.-N. W	4.4	● ⊤ ☇ p.
13	56.34	25.8	31.9	23.2	87	WSW	3.6	10	Ci.-S.	Cu.-N. W	4.6	● ⊤ a. ☇ ●° ⊤ p.
14	55.05	27.6	32.1	23.5	76.8	WSW, W	5.1	7	Ci.-S.	Cu. W	6.1	☇ p.
15	55.92	25.7	28.3	22.9	90	WSW, W	2.6	10	Ci.-S.	Cu.-N. SW, WSW	31.8	● a. p. ☇ p.
16	56.64	26.4	31.3	22.3	83.3	WSW	1.9	10	Ci.-S.	N., Cu.	55.1	●² a. ∪ p.
17	57.84	26.8	32.6	23.7	81.2	W, WSW	2.2	8.7	Ci.-S.	Cu.	------	☇ p.
18	58.52	27.2	31.8	22.3	78.5	E	2.3	6	Ci.-S. NW	Cu.	------	☇° p.
19	57.60	28.3	31.4	25.2	73.2	E	5.7	5.3	Ci., Ci.-S.	Cu. NE, ENE	------	⊎ p.
20	57.90	27.5	30.1	24.5	79.8	E	1.9	7.7	Ci.-S.	Cu,-N. E, ENE	8.4	⊤ a. ● a. p.
21	59.62	28.1	31.7	23.7	81.1	ENE, E	5.2.	4.3	Ci.	Cu. E	13	
22	58.96	28	31.4	25.2	82.2	ENE	2	7.3	Ci. SSW	Cu.-N. NE	2.8	● a.
23	57.15	28.1	32.1	23.1	78.5	Calm	.9	2.2	Ci.	Cu. NE	------	☇ p.
24	56.06	28.9	33.1	24.2	75.8	Calm	1.5	2.2	Ci.	Cu.	------	☇° p.
25	56.61	28.3	33.8	22.9	75.5	E ENE	5.6	2.2	Ci.	Cu.	------	☇ p.
26	57.42	27.3	32.7	22.3	79.6	ENE, SE	4.5	2	Ci.	Cu.	------	
27	57.50	27.5	35	22.2	79	WSW	3.8	2.5	Ci.	Cu.-N. W	------	⊤ p.
28	56.85	28.2	34.2	23.3	77.2	W	5.8	2.8	Ci., Ci.-S.	Cu. W	------	d° ☇ p.
29	56.51	27.8	32.4	23.7	79.6	W quad.	7.1	5.2	Ci.-S.	Cu.-N. W,WSW	8.2	● a. d° p.
30	57.16	27	32.7	23.5	82.8	W, WSW	7.3	5.2	Ci.-S.	Cu.-N. WSW, W	7.8	● d° a. ☇ p.
31	58.08	28.2	33.4	24.6	75.6	W, WSW	6.9	6.2	Ci.-S.	Cu. W	8.4	● ☇ p.
Mean	757.80	27.4	32.4	23.5	80.3	----------	3.6	5.4	----------	----------	-----	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	199.3	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.45	25.9	30.2	23.3	89.2	SW,N	7.2	9.5	Ci.-S.	S.-Cu. Variable	1.5	⊓☇ d p.
2	57.65	25.9	32.4	23.3	86.7	SW,E	8.6	9.3	Ci.,A.-Cu.	S.-Cu. SE	11.7	⊓☇ ● ☇° p.
3	57.78	26.5	31.5	22	84	SW	7.7	8.5	A.-Cu. NE, S	Cu. SW	------	⊓☇° p.
4	57.80	27.5	32.7	23.9	81.8	SW	9.4	9.5	Ci. NE	S.-Cu. S	8.1	⊓☇° ☇° d² p.
5	59.38	27.2	32.7	23	84.5	SW	7.2	7.7	A.-Cu. E	S.-Cu. S	1	●° a. ⊓☇° d² ☇ p.
6	60.23	27.7	33.3	23.5	82.7	SW	8.3	4.5	Ci. E	S.-Cu.,Cu. S,SE	------	♌° ≡° a. ⊓☇ ☇² p.
7	59.90	28.2	34.2	23.5	79.2	SW	7.5	4	Ci.	Cu.-N. SE	------	♌° a. ☇ p.
8	59.29	27.2	32	23.4	80.3	SW quad.	11.5	7.2	Ci. E	Cu. SW	------	☇ ⊤ a. ∞ ⊓☇ p.
9	58.11	28.2	32.8	24.5	76.2	SW quad.	9.8	3.2	Ci. E	Cu. SW	------	⊓☇° p.
10	57.84	27.7	33.6	23.1	78	SW	9.3	4.3	Ci. ENE, E	Cu..-N. W	------	⊓☇° d ⌒² ☇ p.
11	57.70	27.2	34.2	23.4	79.3	SW quad.	10	7.3	Ci. E	S.-Cu. W	------	d ⊓☇° p.
12	57.03	27.5	33	23.6	78.2	SW	9.3	10	A.-Cu. NE, E	Variable NW	7.4	●° ☇ p.
13	55.79	27.5	34.4	23.4	78.5	SW	8.1	9.5	Ci. ENE	Fr.-Cu.,N.W,NW	------	⊓☇ ♋° ∪° p.
14	54.62	26.9	31.9	22.9	79.8	SW	10.8	6.7	Ci. E	S.-Cu. W	------	⊓☇ d ☇ p.
15	55.09	26.8	30.4	23.6	76.8	SW	11.6	9.5	Ci.-S.	S. W	------	d° a. ☇ p.
16	55.94	27.4	32.3	24.5	74.1	SW	10.2	9.5	Ci.-Cu. W	S.,S.-Cu. W,NW	7.9	♌° a. ⊓☇ ● p.
17	57.11	27.4	32.4	23.4	79.1	SW	9.5	9.8	Ci.-S.	Cu. SW	------	♋° ∪° p.
18	58.13	27.6	33.5	22.9	79.9	SW quad.	---------	7.2	Ci.	Cu. SW	------	♌° a. ⊓☇ p.
19	57.42	28	33.5	22.9	78.2	NNE, SW	14.2	4.8	Ci. E	Cu. NE	1.8	♌° a. ☇ ♋² p.
20	57.85	26.8	28.4	24.3	82.2	N quad.	---------	10	A.-Cu. E	S.-Cu. NE	.5	● a. d a. p.
21	59.46	28.1	31.4	23.9	82.7	N quad.	15.5	8	Ci. ENE, E	S.-Cu. NE	------	♌ ≡° a. d² ♋° p.
22	59.12	27.9	32.2	25.8	84.3	N quad.	14	8.5	Ci.	S.-Cu. NE	32.8	♋² ●² a. ♋° p. ⊓☇
23	57.16	28.2	32.2	24.9	82.7	N	12	6.3	Ci.	Cu. NE	6.6	♋° ♌° a. ⊓☇ ● ♋° p.
24	56.36	28.4	31.2	25.3	80.1	NE,N	---------	6	A.-Cu. E	S.-Cu. NE	3	♋° ●° a. ☇° p.
25	56.32	28.6	32.2	24.5	78.9	Variable	9.7	2.2	Ci.	Cu. NE	------	♋° ♌° ≡° a. ☇° ♋° p.
26	57.16	27.9	33.7	23	79.2	SW	8.4	1.7	Ci.	Cu.	------	♋° ♌° ≡ a. ☇ p.
27	57.07	27.9	34.5	22.8	76.7	SW	11.9	3.7	Ci.	Cu. SW	------	♋° a.
28	56.60	26.8	33.1	23.6	84	SW	9.6	6.3	Ci.	Cu.-N. NW,W	5.6	○ d² a. ⊓☇ d ☇° p.
29	56.07	27.6	32.7	23.4	80	SW	8.8	7.5	C.-S. E	Cu. WSW	------	♋° ♌² a. ⊓☇ ∞ ⌒° p.
30	56.76	28.1	33.6	23.1	77	SW	9.4	7.2	Ci.	Cu.-N. NW	2.5	⊓☇ ☇ d° p.
31	57.88	27.2	33.9	23.5	81.5	SW,N	8	9	Ci. NW	Cu. SW	.8	○° a. ⊓☇ d ☇ p.
Mean	757.49	27.5	32.6	23.6	80.5	----------	9.9	7	----------	----------	-----	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	91.2	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.36	25.7	29.7	23.2	88.4	SSE	1	9.8	Ci.-S., A.-S.	N. S, SSW	8.1	☾° ○² a. ● d p.
2	57.26	25.9	31.3	23	86.3	SSW	1.7	9.2	A.-Cu. WSW	N. S	4.6	● d p.
3	57.42	26.2	32.7	22.4	84.8	SE quad.	1.3	8.3	A.-Cu. SW	N. S	8.4	♌ a. ● ☐ ◺ p.
4	57.48	27	32.2	22.9	81.8	S quad.	1.3	8.3	Ci.-S.	Cu. S, SSE	.5	♌ ≡ ○- a. ☐ ◺ p.
5	59.17	27.9	33.3	23.9	79.3	S quad.	1.3	7.8	Ci.-S. NW	Cu. SSW, SW	------	♌ d a. ○² p.
6	60.20	28.6	34	23.4	77.7	NE	1	5.8	Ci.	Cu. S, SE	------	♌ a. ☐ ◺ p.
7	60.19	28	34.8	23.8	79.5	SE	1.3	5.5	Ci.	Cu. NE	20.8	♌ a. ●² ☐ ◺ p.
8	59.37	26.7	33.3	21.5	81.5	S quad.	1.3	5.3	Ci.	Cu., N. SW	------	♌ ≡ a. ┬ ◟ p.
9	58.42	26.2	33.5	23.2	85.5	SE	1	5.2	Ci.	Cu.-N. SW, WSW	1	♌ a. d ☐ ◺ ◟ ◠° p.
10	58.19	27.3	32.6	23.5	83	SE quad.	.8	5.8	A.-Cu. W	Cu. SW, W	2.5	♌ a ● ◠² ◟ p.
11	57.98	27	34	23.6	81.8	E quad.	1.3	5	Ci.	Cu. SW	------	♌ ∞² a. ┬ ◟ p.
12	57.72	26.3	33.7	22	84.2	E quad.	1.3	7.7	Ci.-S., Ci.	Cu., Cu.-N W	29.8	♌ a. d² ●² ☐ ◺ p.
13	56.35	26.2	32.5	22.9	86.2	E quad.	1.2	8.3	Ci.-S.	N. WNW	1.5	☿ ☩² a. ○² d² ◟ p.
14	55.23	25	31.2	23	91.3	NW quad.	1.2	8.5	Ci.-S.	N. WNW, W	15.7	♌ a. d ● ☐ ◺ ◟ p.
15	55.83	24.2	30.3	22.9	91.3	S quad.	1.2	9.7	A.-Cu. NE	N. WSW	5.1	☩°a. ☐ ◺ ● p.
16	56.41	24.7	29.7	22.5	90.5	SSE, WNW	.8	10	A.-S., Ci.-S.	N. SW	5.8	♌ ○² a. ☩² ● ☿ ☿ p.
17	57.33	23.8	26.6	22.5	93.8	S quad.	1.2	9	Ci.-S.	N. SW	2.8	● a. ◡ ◞ p.
18	57.99	26.6	31.3	22.1	84.4	S quad.	1.2	8.7	Ci.-S.	Cu. SW, S	------	♌ a. ☿² ◡° p. ○²
19	57.46	27.4	32.7	22	77.1	E quad.	1.5	4.5	Ci.	Cu. ENE, E	------	♌ ≡ a. ┬ p.
20	58.09	23.6	25.9	22.3	94	NNW	.8	8.5	Variable	N. NE	12.7	♌ ● a. ●° ◡° p.
21	59.76	25.5	30.7	21.5	83.8	E	1.5	6.5	Ci.-S. NE	Cu.	1.3	♌ ☿ a. ○² ◡ ☿ ☿ p.
22	59.06	27.5	33.3	22.6	78.4	SE quad.	1.2	6.3	Ci.-S. NE	S.-Cu. ESE	.3	♌ a. ○· ☐ ◺ p. ☿°
23	57.36	27.1	33.4	23.9	84.2	SE quad.	1	6.3	Ci.-S., Ci.	N., Cu. E quad.	.3	♌ a ☿° ┬ p.
24	56.10	28	34.6	22.5	77.4	N quad.	1.3	5.8	Ci.	Cu. E, NE	24.6	♌ ≡ a ☐ ◺ ●² p.
25	56.22	27.8	34.3	21.7	78	NE quad.	1.3	4.5	Ci.	Cu.-N. NE	------	♌ ∞ °a. ┬ ◠° ◟ p.
26	57.12	27.1	34.3	23	82.5	WSW	1.2	5.7	Variable	Cu. Variable	12.7	●² ☐ ◺ ◟ p.
27	57.33	27.8	34.3	23.7	81.3	SW quad.	1	5.3	Ci.	Cu. W quad.	------	♌ a. ○° p.
28	56.79	27.8	33.7	23	81.8	W quad.	.8	5.3	Ci. SE, NE	Cu. W quad.	1.5	♌ ≡ a. ○· ●° ◟ p.
29	56.20	27	34	22.6	84.3	W quad.	1.3	5.7	Ci. SE, NE	Cu. W	9.9	≡ ○² a. ○° ● ☐ ◺ p.
30	56.78	27.7	32.3	24.2	83.2	SW	2.2	6.8	Ci. SE	Cu., S.-Cu. SW	------	♌ a. ○² ◟ p.
31	58.03	26.5	33	23.5	83.7	SW	1.3	9.2	Ci.-S.	N. WSW	8.4	○² a. ○° d² ● ☐ ◺ p.
Mean	757.62	26.6	32.4	22.9	83.9	----------	1.2	7	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	178.3	

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

	mm.	*°C.*	*°C.*	*°C*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	756.67	26.2	31.1	23.7	89.7	SE	12.8	10	A.-Cu.	S.-Cu. SE	10.1	┬ d² p ● p.
2	56.87	25.4	32.1	22.9	91.5	SE	15.2	8.7	Ci.-S., A.-Cu.	S.-Cu. SE	3.5	d² ● p.
3	56.99	26.9	34.6	23.3	84.8	SE	14.7	8.5	A.-Cu.	S.-Cu. SE	2	◠ a. ┬° d² ◟° p.
4	56.98	28.1	34.1	23.5	79.5	SE	13.2	8.2	Ci.-S., A.-Cu.	Cu., S.-Cu.	------	┬° ◟² d° p.
5	59.10	26.3	35.6	24.1	88.5	SE quad.	8.3	8.3	A.-Cu.	S.-Cu.	29.7	p² ◟ ☐ ◺ d² p.
6	60.16	28.3	34.4	23.5	81.7	SE, N	9.4	6.2	A.-Cu.	S.-Cu.	------	○ ◟° p.
7	60.15	28.2	33.5	24.9	84.8	NW	9.5	6.2	Ci.	Cu., S.-Cu.	8.4	◟° a. p ┬ ◠ ◟ p.
8	59.20	27.7	33.1	23	84.9	SE	10.8	3.5	Ci., Ci.-S.	Cu.	------	◟° p.
9	58.33	27.7	32.2	23.4	85.3	Variable	9.4	4.2	Ci , A.-Cu.	Cu.	1.5	┬ ◟ d² ◠ p.
10	58.14	27.7	31.9	23.9	83.2	Variable	8.7	6.2	A.-Cu.	S.-Cu.	.5	p a. ◟² p.
11	57.97	27.9	33.6	24.4	82.5	N quad.	9.2	6.5	Ci.	S.-Cu.	.8	┬° d ◟ p.
12	57.81	27.1	32.8	24.2	84.7	NW quad.	10.4	9	A.-Cu.	S.-Cu.	------	◟° p.
13	56.32	28.2	32.6	24.9	86.7	Variable	7.8	7.5	A.-Cu.	S.-Cu., Cu.-N.	5.3	p ◟ ┬ ☿ p.
14	55.20	27	33.2	22.6	87	N quad.	8.6	9.5	A.-Cu.	S.-Cu. W	26.7	p ◟ a. ○° ●² p. ┬
15	55.68	26	31.4	22.4	87.3	W quad.	9.1	10	A.-Cu.	S.-Cu.	7.9	d² a. p.
16	56.25	24.7	29.4	22.5	93	Variable	6.3	10	----------	N. NW	22.6	● d a. p.
17	57.20	24.6	29.9	21.8	92.8	SE	6.7	10	A.-Cu.	S.-Cu., N SE, SW	25.1	● a. ◡ ☿ p.
18	57.91	27.6	33.3	22.7	84.7	SE	6.8	9.5	A.-Cu.	Cu., S.-Cu.	------	d a. ○ a. p. ◡° p.
19	57.45	27.6	35.6	24	86.5	Variable	7.1	4	----------	Cu.	3.6	p ◟ ☐ ◺ ◠ p.
20	57.75	25.1	30.2	22.7	93.7	SE	9	7.3	A.-Cu.	N. SE	5.6	d ● ◡° p.
21	59.46	27.4	34.8	22.1	84	E, SE	9.1	6.8	Ci.-S , A.-Cu.	Cu., S.-Cu.	------	┬ ◠ p.
22	59.04	28.4	33.9	23.9	83.3	Variable	7.3	4.5	Ci.-S., A.-Cu.	Cu., S.-Cu.	------	┬ ◟ p.
23	57.16	29	35.2	24.1	82	SE, NW	9.1	4.2	Ci., Ci.-S.	Cu.	------	☿° p.
24	56.09	28.1	34.6	23.4	81.7	NW, S	9.6	5.7	Ci.	Cu. SE	------	◠ ◟ ┬ ☿ p.
25	56.16	28.3	34.4	22.7	80.5	SE, NW	8.5	4	Ci.-S.	Cu., S.-Cu.	------	☿ a. ◠° p.
26	56.99	29.2	34.3	23.3	79.7	Variable	9.9	3.2	Ci.	Cu.	------	☿ a. ◟ ┬° p.
27	57.24	27.8	34.1	24.4	85.6	Variable	10.3	5.3	Ci.	S.-Cu.	------	┬° p.
28	56.78	28.4	33.2	24	84	NW	12.2	6.2	Ci.	Cu., S.-Cu.	------	○ a. ◟° p.
29	56.16	28.7	33.2	24.6	82.2	Variable	11	5.3	Ci., Ci.-S.	Cu.	------	○ a. ◟ p.
30	56.88	26.5	34.7	22.8	90.4	SE	7.8	6.2	Ci.	N. SW	29.4	☿ a. p ◟ ☐ ◺ d² p.
31	57.78	26.3	31.7	23.8	89.3	SE	8.8	9.7	A.-Cu.	S.-Cu. SW	.3	d² a. p. ◟° p.
Mean	757.48	27.3	33.2	23.5	85.6	----------	9.6	6.9	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	183	

METEOROLOGICAL DATA, ETC.—Continued.

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°C.	°C.	°C.	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.21	25.8	29.2	23.7	87.8	SSE, S	3.8	10	Ci.-S.	Cu.-N.	------	◟ d a. ⊤ p p.
2	56.28	26.2	30.9	23.4	86.8	SSE	4.3	10	A.-Cu.	Cu.-N. S	9.6	☊ ≡° ◟ a. ● ◟° p.
3	56.46	26.4	31.6	23.7	86.1	SSE	3.7	10	Ci.-S.	Cu.-N.	1.5	☊ a. ●° ⌐◪ ◟ p.
4	56.75	27.2	33.4	23.4	84	S quad.	2.7	10	Ci.-S.	Cu.-N.	5.6	☊° a. ⌐◪° ● ⊤ p. ◟
5	58.80	27.1	31.9	24	84.5	S quad.	2.5	10	Ci.-S., A.-Cu.	Cu.-N. SSW	------	d ◟ a. p. ⌐◪ p.
6	59.96	27.8	31.9	24.5	84.8	SE quad.	1.7	10	Ci.-S.	Cu. SW	4.3	d a. p. ● ◟ p.
7	59.93	27.6	31.8	25.3	86.1	W quad.	1.5	9	Ci.-S.	Cu.-N.	3.6	◠ a. ⌐◪ ● ◟ a. p.
8	58.96	27.6	31.9	23.6	84.8	Variable	1.8	8.8	Ci.-S.	Cu. WSW	------	☊ ≡° p° a. ◟ p.
9	58.09	27.6	31.9	23.9	85	SW quad.	2.7	7.2	Ci.-S.	Cu.-N. SW	.3	●° a. ◠ d° ◟ p. ⌐◪
10	57.96	27.2	31.6	23.9	86.8	S quad.	2.3	9.5	Ci.-S.	Cu. SW	3.8	☊° ◠ p a. ◟ a. p.
11	57.84	26.9	32	24.5	88.9	S quad.	1.2	10	Ci.-S.	Cu.-N.	7.1	☊ ≡° a. ⊤ ⌐◪ ●° p.
12	57.54	25.9	30	23.3	92.7	S quad.	1.3	10	Ci.-S.	Cu.-N.	21.7	p a. ⌐◪ ⊤ ● p. ◟
13	56.10	26.8	31.9	23	88.7	W	1.7	10	Ci.-S.	Cu.-N., Cu.	12.5	● a. p. ⌐◪ p.
14	54.81	26.6	31.1	22.5	90.2	SW quad.	2.3	10	A.-Cu., Ci.-S.	Cu. WSW	28.2	⊤ a. ⌐◪ ● p° p. d
15	55.44	24.7	29.9	22.1	92.8	S quad.	2.2	10	A.-Cu.	Cu.-N.	79.1	⌐◪ a ●² ⊤ p.
16	55.76	24.4	28.6	22.3	93.2	S quad.	1.8	10	Ci.-S.	Cu. SW	50.9	◟ a. ◯² p. ● a. p.
17	56.54	24.4	28.3	22.4	94.8	S quad.	2.2	10	------	Cu.-N., N.	2 1	● a. ◯² p. ◡² ◟ p.
18	57.47	27.1	31.4	23.8	88	S quad.	2.2	10	Ci.-S.	Cu.	7.1	☊° ◯² ● a. ◡² p.
19	57.23	28.5	33.9	24.1	84.6	SE quad.	2.7	7	Ci.-S., Ci.	Cu., Cu.-N.	------	☊° a. ⌐◪ d ◟ p.
20	57.26	27.8	33.4	23.3	84.2	SE quad.	1.8	9.3	Ci.-S.	Cu., Cu.-N.	------	☊° a. ⌐◪ p° ◡° ◟ p.
21	59.19	27.7	33	22.8	82.8	SE	2.3	8	Ci.-S.	S.-Cu., Cu.	------	☊ ≡° a. ◯² ◡° p.
22	58.87	28.6	32.4	23.9	81.8	WNW	1.7	5.2	Ci.-S., Ci.	Cu.	------	☊ ≡° a.
23	57.02	28.6	33.4	24.5	84	Variable	1.7	8.5	Ci.-S.	Cu. S	------	☊° a. ⌐◪ p.
24	55.94	28.3	32.5	24.6	83.5	S quad.	2.2	5.5	Ci.	Cu.	------	☊° a. ⊤ ◟ p.
25	55.98	28	32.3	23.8	81.7	NW quad.	2	7.2	Ci.-S.	S.-Cu., Cu.	------	◡° ☊° a. ◟ p.
26	56.86	28.4	32.9	24.4	82.1	Variable	1.8	6.8	Ci.-S.	Cu., Cu.-N.	------	☊ a. ◟ p.
27	57.10	28.4	32.6	23.8	79.7	NW quad.	2.2	7.5	Ci.-S.	Cu.	------	☊ ≡° a.
28	56.77	28.2	32.5	23.7	80.7	NW quad.	1.8	8.7	Ci.-S.	Fr.-Cu. NW	------	●° a. ◯° p. ◟ a. p.
29	56.03	27.5	32.5	23.4	80.8	W quad.	2	8.5	Ci.-S.	Cu.	------	☊² ≡ a. ◟ p.
30	56.17	27.2	32.6	24.1	86.3	SE quad.	2.5	9.3	Ci.-S.	Cu.-N. S	1.1	☊ ≡° a. ⌐◪ ◠° p. d
31	57.49	25.7	29	23.5	91.7	SSE	2.7	10	Ci.-S.	Cu.-N.	15.7	◟ ● ⌐◪ a. p.
Mean	757.19	27.1	31.7	23.7	86.1	----------	2.2	8.9	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	254.2	

BAGUIO.[1]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	°C.	°C.	°C.	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	634.80	17.1	20.5	15.7	93.3	SE quad.	19.2	10	A.-S.	Fr.-N. SEbyS	4.3	≡ ⊕ a. d° ● p.
2	34.72	17.9	23	15.4	86.5	ESE, SE	23.9	8.3	A.-Cu. S	Cu. SE	8.9	p ● p.
3	35.06	17.8	23.6	15.6	90.2	ESE, SE	25.7	8.7	A.-Cu.	S.-Cu. SE	7.6	p ● ⊤ ⌐◪ p.
4	35.43	18.5	22.8	16.2	85.4	SE quad.	16.1	9.3	Ci.-S.	S.-Cu. ESE	29.2	◯ ⊤ ⌐◪ ● p.
5	37.14	17.8	23.4	15.9	92.8	SE quad.	11.2	9.7	Ci.-S.	Fr.-Cu. SW	6.4	≡° a. p ● ⊤ p.
6	38.29	18.8	23.8	15.9	90.5	W	10.2	9	Ci. NE	Fr.-Cu. WNW	.3	●° ≡ p.
7	38.11	17.9	23.6	15.9	95	Variable	11.5	8.6	Ci.	Cu.-N. NEbyN	11.4	☊ a. d ● ⊤° ≡ p.
8	37.24	18.2	23.4	15.7	89.7	W quad.	12.4	8.1	Ci. E	Cu.	.3	☊ a. ≡ ●° p.
9	36.46	17.9	23.6	16.2	87.8	NW quad.	13.6	6	Ci.	Cu. W	1.1	☊ a. ●° ≡ ◟ p.
10	36.34	17.7	23	15.2	91.8	W	13.7	8.7	Ci.	S.-Cu. W	2.3	☊ p a. ◠ p. ● ≡²
11	36.10	17.8	22.1	15.9	94.3	W	13.6	9.9	Ci.	Variable	14.2	d° ≡ a. p ● p.
12	35.81	17	21.4	15.4	99	W	15.9	10	------	Fr.-N.	24.9	≡² ● a. p.
13	34.70	17.2	21.1	15.2	94.5	W, NW	17.5	9.7	Ci.	N. WNW	16.5	≡ a. ● a. p.
14	33.59	16.6	19.1	15.4	98.8	W quad.	17.8	10	------	N.	28.4	≡² d ● a. p.
15	33.72	16.2	18.8	14.1	99.8	W quad.	22.2	10	------	Fr.-N.	60.2	≡² ● d a. p.
16	33.77	15.9	19	14	99.5	W	29.5	10	A.-S.	N.	72.4	≡² ● d a. p.
17	34.52	15.6	18.4	14.3	96.2	WSW	30.6	9.9	A.-S.	N. SW	23.1	◡° a. ● ≡ a. p.
18	36.01	18.2	22.9	15.3	93	W	14?	10	Ci.-S.	Cu.	------	◯ a. p. ≡ p.
19	35.82	19	24.5	16.1	86	E	13.8	5.1	Ci.	Cu.	15.7	☊ a ≡ ● ⊤ ⌐◪° p.
20	35.76	17.9	22.9	15.4	81	E quad.	17	8.4	A.-Cu. ENE	Cu.	8.3	p ● p.
21	37.64	19.4	24.5	16.6	83.7	E	13.6	7.7	Ci. NE	Fr.-Cu. SE	14.5	≡° ⊤ p ● p.
22	37.52	19.4	24	16.7	85	W, E	10.5	5.9	Ci.	S.-Cu. E	17.8	● p. ≡² a. p.
23	35.92	19	23.9	16.4	89.2	Variable	11.4	7.7	Ci. NW	S.-Cu. NW, NE	6.4	● ⊤ ◟ p. ≡² a. p.
24	34.94	18.6	24.3	16.3	91.5	E quad.	12	6.7	Ci.	S.-Cu. N	1.5	≡² ● ◟ p.
25	34.98	18.5	24.4	16.2	90	E quad.	10.2	5.4	Ci.	Cu.	4.6	● ⌐◪ p.
26	35.48	18.8	23.3	16	90.3	NW quad.	13.5	7.4	Ci.	S.-Cu. NW	------	☊ a. ≡ ⊤ d p.
27	35.78	18.2	23.8	16.5	86.5	W quad.	11.2	6	Ci.	Cu.	5.8	☊ a. ● p.
28	35.28	17.6	22.8	15.5	89.2	NW quad.	15.6	7.1	Ci.-S.	Fr.-N., Cu. NW	.3	☊ a. p° p.
29	34.65	17.5	21.8	15.2	85.5	W	15.9	7.4	Ci.	S.-Cu. NW	------	☊ a. ≡° p. ◯ a. p.
30	34.94	18	23.4	15.4	86	W quad.	---------	7.4	A.-Cu. WSW	Cu.	13.5	● ≡² p.
31	35.94	17.9	21.4	16	91.3	W	---------	10	Ci.-S.	Fr.-N.	5.3	● ≡ a. p. ◯ p.
Mean	635.69	17.9	22.5	15.7	90.8	----------	16	8.3	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	405.2	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean)	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Perct.*		*0–12.*	*0–10.*			*mm.*	
1	756.12	26.8	29.9	24.4	84.4	S quad.	1.3	9.8	Ci.-S.	N. S	8.7	● ⌐◪ a. p. d p.
2	56.33	26.9	32.3	23.6	80.8	SE quad.	1.2	3.5	Ci.-S.	Cu.	7.4	⌐◪ d p.
3	56.89	26.8	32.5	23.2	83.3	SW quad.	1	6.5	A.-Cu.	S.-Cu., Cu.	63.5	☋ a. d° ⌐◪ ●² p.
4	57.24	26.7	31.8	23	86.8	Variable	1	7.5	Ci.-S.	Cu.	2.8	⌐◪° d ● p.
5	59.18	26.9	31.5	24.1	83.5	S quad.	1.2	8.8	Ci.-S.	Cu.	1.8	d ● ⌐◪ ◟° p.
6	60.44	27.5	31.5	23.9	80.5	S quad.	1	8.8	Ci.-S.	Cu.-N.	.3	d° ◟° p.
7	60.31	27.4	32.4	23.9	81.8	SE quad.	1	6	Ci.-S., A.-Cu.	Cu.-N., Cu.	8.9	d ● ⌐◪° p.
8	59.16	27.1	31.4	23.6	83.3	SE quad.	1	3.8	A.-Cu. NE	Cu. SW	4.1	● p.
9	58.25	26.8	31.2	24.5	87.2	S quad.	1.2	1.8	Ci.-S.	Cu.-N. SWbyW	2.3	● a.
10	58.19	26.9	30.1	24.9	86.2	S quad.	1	7.8	Ci.-S.	Cu.-N.	6.2	d a. ● ◟° p.
11	58.01	27.3	31.6	24.4	84.5	S quad.	1	7.2	Ci.-S., A.-Cu.	Cu.-N.	4.6	d ● ◟° p.
12	57.66	26.2	30	23.9	85.2	SE quad.	1	5.2	Ci.-S., A.-Cu.	Cu.-N.	2.1	d ● a.
13	56.29	26.4	30.9	23.5	83.2	S quad.	1.3	7.7	Ci.-S.	Cu.-N. SW	1.8	d° ● ◟° p.
14	55.12	25.8	30.6	22.3	89	SE quad.	1	10	Ci.-S.	Cu.-N. SSW	24.1	● a. p. ⌐◪ ☋ p.
15	55.56	25.2	28	23	89	SW quad.	1.5	10	Ci.-S.	N. SW	48.8	● a. p.
16	55.63	24.4	27.5	21.9	92.8	S quad.	1.3	10	Ci.-S.	N. SSW	71.5	●ᵍ a. p.
17	56.40	24.3	26.4	22.4	91.7	SSE	1.3	10	Ci.-S.	N. SSW	28.8	● a. p.
18	57.79	27.5	30.6	22.9	80.8	S quad.	1.2	9.8	Ci.-S.	S.-Cu.	------	☋ p
19	57.80	27.7	32.5	23.5	79.6	E quad.	1	2.2	A.-Cu.	Cu.	------	⌐◪ d ⌒ p.
20	57.39	27	31.6	23	81.5	S quad.	1.3	3.7	A.-Cu.	Cu.	------	d° ◡ p.
21	59.67	27.7	32.1	23.6	82.5	N quad.	1	3.7	A.-Cu., Ci.	Cu.	------	☋ a. p. ⌐◪ p.
22	59.16	28.2	32.7	25	85.7	Variable	1.2	2.5	A.-Cu.	Cu.	------	☊ a. d° p.
23	57.21	28.6	32.4	25	82.8	Variable	1	.8	A.-Cu.	Cu.	------	
24	56.21	28.4	32.5	24	78.1	E	1	1.8	Ci.-S.	Cu.	1.3	☋ a. p. ⌐◪ ⌒ ●° p.
25	56.32	28.1	33.1	23.9	74.8	SE quad.	1	1.5	Ci.-S.	Cu.	------	⌐◪ d ⌒ p.
26	57.20	28.3	33	23.9	75.8	Variable	1	.2	Ci.-S., Ci.	Cu.	------	☋ a.
27	57.34	28.1	32.6	24.4	80.8	Variable	1	.3	Ci.	Cu.	------	◟° p.
28	56.99	27.9	32.7	24.5	79.5	SW quad.	1	.7	Ci.-S.	Cu.	10.7	☋ a. d ● ◟° p.
29	56.18	27.4	32	23.9	82	SE quad.	1	1.2	Ci.-S.	Cu.	------	☋ a.
30	56.24	28.1	32.1	23.7	75	SE quad.	1.2	3	Ci.-S.	Cu.	5.8	☋ a. ⌐◪ p.
31	57.57	27.7	30.8	24.9	79.9	S	1.7	9.7	Ci.-S.	Cu.-N., Cu.	------	● a. ◟° p.
Mean	757.41	27.1	31.3	23.8	83		1.1	5.3				
Total											305.5	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.45	28.1	34.9	24.4	77.2	SE	1	5.5	Ci., Ci.-S.	S.-Cu.	------	☊ a. ⊤ p.
2	57	27.3	36.1	23.2	82.8	S	.8	5.8	Ci. W	Cu.-N. NE	------	☊ a. ⌐◪ p.
3	57.47	27.5	36.6	23	82.7	SE	1	7.7	A.-Cu. NW	Cu., Cu.-N. SE	3.3	☊ a. ● ⌐◪ d ◟ p.
4	57.46	26.2	33.7	22.7	82.2	Variable	.5	9.3	Ci.	Cu.-N. N	11.2	● ⌐◪² ◟ p.
5	58.99	27.5	35.3	23.6	83	S quad.	.5	8.5	Ci.-S.	Cu. SE	6.6	○ a. ⌐◪ ◟ ● p.
6	60.27	28.9	35	23.5	79.3	NW	.3	8	Ci.-S.	Cu. S	------	⌐◪ d p.
7	60.08	27.4	35.8	23.5	79.7	SE	.8	6.7	Ci.-S.	Cu. SE, S	------	☊ a. ⌒ ⌐◪ d p.
8	58.38	28.5	35.5	22.5	76.1	SE	1.3	5.8	Ci.	Cu.-N. S	------	☊ a.
9	57.04	28.8	37	22.2	74.3	NE	.7	1.8	Ci., Ci.-S.	Fr.-Cu.	------	☊ a.
10	57.04	29.4	37.1	24.3	74.3	NE	1	4.7	Ci.	Cu.-N., cu. NW, E	------	☊ a ⊤ d² ⌐◪ ◟ p.
11	57.18	28.6	37.2	23	76.1	SE	.8	3.5	Ci.	Cu.-N. SE	1.5	☊ ☊² a. ● ⌐◪ ◟ p.
12	56.75	28.4	36.3	23	77.5	S quad.	1.2	6.5	Ci.	Cu. E	------	☊ ☊ ○² a. ⌐◪ ◟ p.
13	55.40	28.4	35.2	23	77.5	NE	.8	8.3	Ci.-S.	Fr.-N.	------	☊² a. ◡° ◟ p.
14	54.33	27.3	33.2	24.5	83	SE	1	9.7	Ci.-S.	Cu.-N. NE	18.5	● p.
15	54.43	25.8	29.8	23	87.2	SE, SW	.3	10		Cu.-N. SW	21.8	● a. p.
16	54.89	24.6	26.2	22.9	91.7	S quad.	.7	10		N.	19	● a. p.
17	54.99	25.5	29.5	22.1	87.3	SE	.7	9.5	Ci.-S., Ci.-Cu.	N., S.-Cu.	1.3	● a. ◡² p.
18	57.27	27.5	33.9	21.6	79.7	S	.5	8.7	Ci.-S.	S.-Cu.	------	☊² ○² a. ○° ◡² p.
19	57.66	28.5	36.4	22.6	78.2	SE	.5	3.7	Ci.	Cu. S	------	☊ a. ⊤ ⌒² ⌐◪ ◟ p.
20	58.53	26.2	30	23	87	SE	.3	8.5	Ci.	Cu.-N. E	2.5	☊² ● a. ⌒ ◟ p.
21	59.83	27.8	35.8	21.6	79.5	S	.3	2.3	Ci. S	Cu. E	------	☊ a.
22	59.45	28.8	35.6	23.5	78.2	Variable	.5	4.8	Ci., A.-Cu.	Cu. E, SE	------	☊ a. ◟ p.
23	57.22	28.8	36	23.5	76.8	NW	.5	4.2	Ci.-Cu.	Cu. NW	------	☊ a.
24	56.17	29.2	36.8	23.2	75.3	SE, NW	.7	5	Ci.	Cu. S, W	------	☊ ☊ a. ⌒ ⌐◪ ◟ p.
25	56.25	28.7	36.4	23.2	74.3	NW	.3	3.2	Ci.-S. NW	Cu. Variable	------	☊ ☊ a.
26	56.96	28.5	36.3	22.2	74.7	NW	.5	3.7		Cu. S	------	☊ a. ⌒ ◟ p.
27	56.99	29.2	37.4	23.4	69.7	NW	1	4	Ci.	Cu.-N. W	------	◟ ☊² ≡ a. ⌐◪ p.
28	55.88	29	37	23.1	73.2	NW	.3	5.3	Ci.	Cu. WSW	------	☊² a. ◟ p.
29	54.94	29.6	37.6	23.3	69.7	NW	1	2.7	Ci., Ci.-S.	Cu. NNW	------	☊ a. ∞ p.
30	55.88	29	37	22	71.9	SE	.7	6.5	Ci.	Cu.-N. NW	3	☊² a. ● ⌐◪ p.
31	57.05	27.8	35.5	23.3	78.7	SE	.7	8.5	Ci.-S.	Cu.-N.	------	☊ ○² a. ◟ p.
Mean	757.04	28	35	23	78.7		.7	6.2				
Total											88.7	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	756.58	27.8	33.2	24.5	77.7	Variable	9.2	7.3	Ci.-S. W	S.-Cu., Cu.-N. S	------	┌° p.
2	56.96	28.1	33.5	24.1	75	S quad.	11.7	2.7	Ci.-S. W	Cu.-N. S	------	┼° p.
3	57.47	28.1	32.5	24.1	74.7	S	13.6	7.2	A.-Cu. SE	S.-Cu.	------	┼° ↙ p.
4	57.66	26.6	31	22.9	84.5	S quad.	9.6	9.7	Ci.-S.	Cu.-N. SE	------	┌◪ d. ↙ p.
5	59.20	26.8	33	23.6	83.2	S quad.	10.8	10.	Ci.-S. S	S.-Cu. S	4.6	┼● ◠ ┌◪ p.
6	60.48	28.1	33.2	23.6	76.8	S quad.	7.8	8.3	A.-Cu. W	S.-Cu. E	------	d a. ↙ p.
7	60.03	28	33.6	23	77.7	S quad.	12.9	.7	A.-Cu. NE	S.-Cu. SW	5.1	┌◪ ● ↙ p.
8	58.40	27.4	33.1	22.8	75.8	S	14.9	1.5	Ci.-S. NE	S.-Cu.,Cu.	------	
9	57.16	28.4	33.9	24	75.5	S, E	11.2	.3	Ci.	Cu. W	------	∞ a. p.
10	57.24	28.7	33	24.6	72.5	S	10.8	1.5	Ci. E	S.-Cu., Cu.-N.	------	∞ a. p. ↙ p.
11	57.32	28.4	34	23.7	74.2	S quad.	13.8	1.5	------	Cu.-N. W	------	∞ a. p. ↙ p.
12	56.79	27.7	33.2	24	77	S	12.7	5.5	Ci. E	S.-Cu., Cu.-N. W	------	∞ a. p. ┼ p.
13	55.39	27.7	32.3	23.9	77	S quad.	10.6	7.	Ci.-Cu., A.-Cu. E	S.-Cu.	------	◯ ∞ a. p. ∪ p.
14	54.06	28.1	33.4	24.5	78	S	8.8	9.7	Ci.-S., A.-Cu. E	S.-Cu. NE	------	◯ ┼° ∪ p.
15	54.26	26.2	30	24.2	85.8	S quad.	---------	10	Ci.-S., A.-Cu.	N. NW	3.9	↙ a. ●° p.
16	54.13	24.4	29.5?	23.2	89.6	S	23.1	10	------	S.-Cu., N. W	4.4	● a. p.
17	54.68	25.8	27.5	23.1	77.8	S	25.7	10	Ci.-S., A.-Cu.	S.-Cu. SW	------	∪
18	57.44	27.6	33.4	23.5	74.8	S	10.5	10	A.-Cu.	S.-Cu.	------	∪
19	57.91	28.6	33.2	23.6	78.7	Variable	8.2	1.7	Ci.-S., A.-Cu.	S.-Cu.,Cu.-N.	------	Ω a. ↙ p.
20	58.68	26.9	32	23.1	83.5	S, E	5.3	4.5	Ci.-S. E,SE	S.-Cu. E	1.5	Ω ≡° ● a. ┼ ●° p.
21	60.22	27.6	33.5	22.6	77.2	S, NE	13.4	.7	Ci.-S. SE	Cu.-N.	------	Ω ≡° a.
22	59.81	28.6	34	24.2	76.4	NE, SW	12.1	1.2	Ci.-S. SW	Cu.-N. SE	------	Ω ≡° a.
23	57.75	28.3	32.6	24.4	76.6	NE, SW	11.2	.2	------	Cu. S	------	Ω ≡° a.
24	56.60	28.5	32.8	22.7	76.7	NE quad.	11.4	0	------	------	------	Ω a. ↙ p.
25	56.74	28.2	32.5	24.6	77.3	NE quad.	10.7	.2	------	Cu.	------	Ω a.
26	57.44	28.3	33	23.6	75.3	Variable	8.2	0	------	------	------	Ω a.
27	57.33	28.3	33	24.1	75.5	NW quad.	11.7	1.3	------	Cu.-N. W	------	Ω a. ↙ p.
28	56.09	28.1	33	24.1	77.7	W quad.	15.2	.7	A.-Cu. W	Cu.-N.	------	Ω a. ↙ p.
29	55.32	28.3	33.5	23.5	73	S quad.	11.3	.2	------	Cu.-N. W	------	Ω a. ↙ p.
30	55.97	28.3	33	23.2	69.7	S	10.1	6.2	Ci. E	S.-Cu. W	------	◯ a. p. ↙ p.
31	57.02	28.5	32.5	24.6	76.8	S, N	10.3	7.8	Ci. W	S.-Cu.	2.5	◯ a. ● ┼° ↙ p.
Mean	757.17	27.8	32.6	23.7	77.5	----------	11.9	4.6	----------	----------	------	
Total	--------	------	------	------	------	----------	---------	---------	----------	----------	22	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	20.9	89	71	6	10	------	☊² a.
2	31.3	21.2	95	71	6	10	------	☊² a.
3	33	21.5	91	79	8	10	------	☊² a. ☾ p.
4	33.3	21.2	95	69	6	10	10.2	☊ ≡ ● a. ☾² p.
5	32.2	21.1	98	80	10	6	------	● a. d p.
6	31.1	21.5	91	83	6	10	20.1	● p.
7	30.8	22	97	91	10	10	31.2	● a. p.
8	30.6	20.8	98	78	10	10	------	●° p.
9	33.7	20	95	73	4	10	------	☊² a.
10	31.8	20.6	96	77	5	10	9.1	☊² a. ● p.
11	30.2	19.9	94	75	6	10	3	● ☾² p.
12	31.5	20.1	95	77	2	10	------	☊² a.
13	32.3	21.1	95	86	6	10	------	☊² a.
14	32.9	20.9	96	57	4	10	------	☊ ≡ a. ☾² p.
15	34.2	21.6	96	78	4	10	------	☊² a. ●° ☾ p.
16	33.5	21.9	95	65	4	10	------	
17	33	21.7	95	61	5	8	------	☾ p.
18	31.3	22	91	76	10	10	------	●° a.
19	32.7	21.6	92	73	6	8	13.5	☊° a. ●° ☾² p.
20	32	22.4	97	60	8	10	13.5	d° a. ●° a. p.
21	31.9	21.8	95	76	10	8	14.5	
22	32.7	22.2	97	81	8	10	22.1	●° a. p.
23	30.8	22	95	86	10	8	------	☊° a.
24	31.6	21.6	97	80	10	10	------	☊° ●° a.
25	32.1	21.7	94	75	6	10	------	
26	32.5	21.6	96	70	8	10	------	☊° a.
27	32.6	21.3	96	70	6	8	------	☊° a. ●° p.
28	32.3	21	92	82	6	8	------	☊° a. d p.
29	32.3	21	92	75	7	8	------	●° a.
30	32.4	22.2	99	63	9	10	------	☊ a.
31	32.1	22.8	95	86	4	9	------	☊° a. ☾ p.
Mean	32.2	21.4	94.8	75	6.8	9.4	------	
Total	------	------	------	------	------	------	137.2	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	21.2	97	79	3	7	------	☊ a.
2	31.1	21.3	95	78	3	10	------	☊ a.
3	31.8	22	96	76	9	6	------	☊ a. ☾ p.
4	29.8	22.4	96	91	4	10	19.5	● a. p. d ☾ p.
5	28.5	22.5	96	81	2	10	12.2	☊ p a. ●° p.
6	31.8	22	90	84	10	9	2.3	● a.
7	29.8	22.5	96	92	10	10	13.2	d a. ● p.
8	30.8	22	96	92	3	9	2.8	☊ a. p p.
9	30.8	20	94	78	0	10	16.5	☊ a. ● p.
10	31.3	21	94	75	1	9	7.6	☊ a. ● p.
11	30.5	22.3	97	86	10	10	------	☊ a. ┼ p.
12	30.8	21.5	97	75	2	9	------	☊ a.
13	32.8	21.8	96	73	3	9	------	☊ a.
14	31.8	21.2	96	69	3	9	------	☊ a.
15	30.5	21.5	96	86	2	9	.8	☊ a. p p.
16	32.3	20.3	96	69	1	10	.3	☊ a. d ☾ ☿ p.
17	31.3	21.9	96	70	2	10	1.8	☊ a. p ☾ ☾ p.
18	31.3	23	96	78	6	10	------	☊ a. ☾ p.
19	31	22.5	96	75	10	7	2	☊ a.
20	32.8	23	97	71	10	5	9.1	● a.
21	31.3	23	96	83	10	5	10.9	● a.
22	31.8	22.5	96	79	10	10	1	● a. p. ┼ p.
23	28.8	23	96	88	10	10	1	☊ a.
24	28.8	23.2	96	86	1	10	------	●° a.
25	29.4	22.8	96	88	3	10	5.8	☊ a. d ●° p.
26	30.8	21.8	91	88	1	10	9.7	d a. ● p.
27	31	21.2	96	65	1	9	------	☊ a. ◠ p.
28	30.3	22	97	75	1	10	3	☊ a. ●° p.
29	31.3	21.2	96	85	10	10	------	☊ a.
30	32.8	21.8	96	75	2	10	1.5	☊ a. p p.
31	30.8	21	96	78	1	10	------	☊ a. p°. p.
Mean	30.9	21.9	95.6	79.6	4.6	9.1	------	
Total	------	------	------	------	------	------	121	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.3	22.3	87	74	6	7	------	
2	29.6	22.9	84	71	6	9	1.8	●° p.
3	29.9	22.9	85	76	8	9	------	
4	31	22.6	80	63	6	9	6.1	● a.
5	30.6	24.1	92	64	9	8	30.3	● a. p. ☾ p p.
6	30.6	22.6	94	72	9	9	2.3	● a. p. ☾ p.
7	29.1	22.5	90	76	9	9	------	d ☾ p.
8	27.7	23.9	86	79	9	9	------	
9	30.6	22	85	78	4	8	------	☊° a.
10	30	23	86	73	1	7	------	☊° a.
11	30.4	23.7	82	69	10	7	------	d a.
12	29.6	23.5	86	73	6	9	------	
13	30	23	86	69	4	8	------	☾ p.
14	30.1	22	81	69	5	2	------	☊° a.
15	30.8	22.5	83	70	4	8	------	
16	31.6	23	83	62	3	7	------	☊° a.
17	31.5	24.2	83	65	7	8	1.8	p p.
18	32	23.5	91	69	10	4	7.1	☾ p.
19	31.1	23.4	92	67	7	6	25.4	● a. ☾ p.
20	30.8	22	98	67	9	3	------	● a.
21	29.7	24	91	74	6	2	3.8	┼ ● p.
22	31	23.5	91	69	9	3	------	◠ a.
23	29.2	24	85	79	10	10	------	☾ d p.
24	28.8	24	88	74	10	10	------	d p.
25	29.5	23	90	88	2	10	.5	p p.
26	29.5	22.8	91	73	8	9	------	
27	29.9	22.8	92	70	3	3	------	◯ p.
28	29.6	23	88	78	3	3	------	
29	29.9	24	87	72	9	8	------	
30	31	23.5	89	67	6	6	------	
31	30.8	22.8	91	73	4	3	5.1	☊ a. ☾ ● p.
Mean	30.2	23.1	87.6	71.7	6.5	6.9	------	
Total	------	------	------	------	------	------	84.2	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	22.2	98	75	6	7	17.3	● p.
2	31.9	22.1	96	72	5	6	5.6	● p.
3	30.8	21.3	97	71	5	6	------	
4	30.2	22.1	98	77	7	6	------	
5	30	22.1	97	70	5	7	------	┼ a.
6	30.7	21	97	70	6	8	23.6	●² p.
7	28.5	21.9	99	74	9	6	------	d° a.
8	31	21.1	98	74	5	7	27.2	●² p.
9	31.2	20.9	98	71	6	7	------	
10	31.6	20.4	94	61	6	5	------	
11	31.2	21.1	96	66	6	7	20.1	● p.
12	31	20.9	96	71	6	7	------	● a. ┼ p.
13	31.9	22	96	69	5	6	23.9	●² p.
14	31.4	22.8	97	69	5	5	16	┼ ● p.
15	31.5	21.9	98	71	6	5	------	
16	31.5	22.3	95	71	5	5	------	
17	30.6	22.1	96	71	6	7	------	
18	31.3	21.8	97	65	5	8	31.2	●² p.
19	31	21.6	97	68	5	5	------	┼ ● a.
20	31.2	21.9	96	72	5	5	------	
21	32.5	22.1	97	64	5	6	11.9	● p.
22	31.1	21	98	67	5	6	------	
23	31.6	22.1	96	69	5	7	------	☾ p.
24	31.8	21.4	97	68	5	6	------	
25	31.4	21.1	96	71	6	5	------	
26	31.7	21.8	97	63	5	5	------	┼ a.
27	32.4	21.6	96	59	7	5	------	☾ p.
28	32.3	21.8	94	59	6	6	------	
29	31.2	20.8	98	65	5	5	------	
30	32.1	21.5	96	53	6	5	------	┼ p.
31	32.2	22.1	96	68	5	8	------	
Mean	31.3	21.6	96.7	68.2	5.6	6.1	------	
Total	------	------	------	------	------	------	176.8	

METEOROLOGICAL DATA, ETC.—Continued.

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.9	22.5	96	62	9	5	2.5	☿² ☾° p.
2	33.2	22.7	95	63	10	9	1.3	☿ p.
3	32.8	22.3	94	65	10	9	------	☾° p.
4	32.5	22.8	92	63	10	8	------	☌° a. ☾° p.
5	33.2	22.9	93	58	7	4	------	☌ a. ☾ p.
6	32.8	21.3	92	59	2	4	4.6	☌° a. ☿ p.
7	32.4	22.3	94	67	6	10	------	⊤ p.
8	33	22.7	93	68	9	10	------	☾° p.
9	32.6	22.4	91	64	8	7	------	☾ p.
10	32.2	21.1	92	61	4	6	------	☌ a. ☾° p.
11	33.3	21.3	92	62	2	9	------	☌ a. ☾° p.
12	32.9	21.3	90	62	7	9	------	☌ a. ☾° p.
13	33.9	22	90	58	8	6	------	☌° a. ☾° p.
14	33.8	22.3	92	56	6	7	------	☌ a. ☾° p.
15	33.3	21.7	90	56	4	6	------	☌° a. ☾° p.
16	32.1	20.7	93	65	2	4	------	☌ a. ☾ p.
17	31.5	21.8	92	65	4	5	------	☌ a.
18	33.2	21.4	92	63	7	6	------	☌ a.
19	34.5	22	88	61	4	4	------	☌ a.
20	33.4	22.1	88	64	3	4	1.3	☌ a. d p.
21	33.3	22.1	90	59	6	4	------	
22	33	21.7	92	59	0	4	------	☌° a.
23	33.1	21.6	92	62	4	6	------	☌° a.
24	32.8	22.2	88	60	2	4	------	☌ a. ☾° p.
25	32.9	21.6	92	59	5	6	------	☌° a. ☾° p.
26	33	22.8	93	61	4	7	3.6	☌° a. d° ☾° p.
27	33.5	22.4	94	65	4	8	------	☾° p.
28	33.1	21.1	92	57	4	6	------	☌° a.
29	32.1	23	90	59	5	7	------	☌° a. ☾ᶜ p.
30	31.9	22.7	92	61	3	8	------	☌ a.
31	31.8	23.6	94	59	9	5	------	☌ ≡° a. ☾ p.
Mean	32.9	22.1	91.9	61.4	5.4	6.4	------	
Total	------	------	------	------	------	------	13.3	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	------	93	75	8	5	------	☌ ∩ a. ☾ p.
2	32.8	------	93	73	7	4	------	☌ a. ☐☿ p.
3	32.6	24	90	72	7	3	.5	☌ a. ☐☿ a. p.
4	32.7	23.8	88	65	8	5	------	● a. ☾ p.
5	------	23.4	93	65	8	5	1.3	● ☾ p.
6	32.6	21.9	89	62	7	4	1.3	⊤ ☾ p.
7	33.2	22.1	88	73	8	5	------	● a.
8	32.8	23.1	90	74	7	6	------	☿ a. ⊤° p.
9	32.5	23.7	89	72	6	2	------	☌ a.
10	33.6	24.2	90	68	8	3	------	☌ a. ⊤ ☾ p.
11	33.3	------	83	72	8	6	2	☌ a. ⊤ p.
12	32.4	------	91	79	10	9	4.3	● a. p. ⊤ p.
13	32.9	------	88	71	8	5	------	● a. p. ☾ p.
14	33.1	24.2	91	71	7	6	------	☌ a. ⊤ ☾ p.
15	33.8	24.2	84	68	8	5	------	☌ a. ☾ p.
16	34.6	------	94	65	8	5	------	☌ a. ☋ ☾ p.
17	34.8	23.5	90	65	4	7	1.8	☌ a. ⊤ ☾ ☋ p.
18	35.1	24.1	93	65	8	3	------	● d a. ☋ p.
19	34.6	25.3	88	64	8	7	3.6	☿° a. ☾ ☋ ● p.
20	32.8	24.1	96	63	9	5	1.5	☾ ● p.
21	33.4	------	95	62	7	7	------	≡° a. ☾ ⊤ d p.
22	33	23.4	89	66	10	5	------	☾ p.
23	32.8	24.4	87	70	10	5	------	⊤ a. ☾ p
24	30	22.2	87	72	10	10	5.8	● a. p. ☾ p.
25	30.3	22.8	95	81	10	7	1	≡° ● a. ⊤ p.
26	32.3	23.4	89	65	7	6	------	☌ a. ☾ p.
27	32.7	23.2	87	67	8	8	------	☌ a. ☾ p.
28	32.5	23.6	90	63	8	5	------	☌ a.
29	32.3	23.3	89	65	9	6	------	☌ a. ☾ p.
30	29	23.7	90	76	7	8	------	☌ a.
31	32.1	23.5	92	67	10	7	2.8	● p.
Mean	32.8	23.5	90	68.9	8	5.6	------	
Total	------	------	------	------	------	------	25.9	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	23.6	96	59	7	7	12.4	● a. p. ⊤ p.
2	29.7	23.6	95	71	9	9	.8	☿° a. p. ●° p.
3	30.9	23	93	62	10	7	------	
4	30.3	22.9	90	76	9	9	------	☌ a. ☾ ⊤ p.
5	33	22.9	91	82	6	8	24.2	☌ a. ● ☾ p.
6	32.1	23.1	97	92	3	7	45.2	☌² a. ● ⊤ p.
7	31.6	22.4	93	74	10	10	------	☌ ☿° a. p° p.
8	30.9	22.3	95	63	5	5	2.3	≡° a. ☐☿ ● ∩ p.
9	33.1	22.6	93	66	1	6	------	☌ a. ⊤ ☾ p.
10	32.3	23.1	92	72	7	8	------	☌ a. ⊤ ☾ p.
11	31.1	22.4	91	61	4	6	------	☌ ☾ ○² a. ⊤ p.
12	31	22.7	95	66	8	7	------	☌ ○ a.
13	31.5	23.1	96	63	7	8	------	☌ ∞ a. ⊕ p.
14	32.3	23.5	96	55	8	6	------	☌ a. ⊤ ☾ ☿° p.
15	32	22.8	93	68	9	8	------	☌ a. ☐☿ d p.
16	33.5	23.6	93	63	5	7	------	☌ a. ☋ p.
17	33.8	23.5	93	74	6	7	------	☌ a. d ⊤ p.
18	32.5	23.7	91	54	5	4	------	☌ a. d° ☋ ☾ p.
19	33	23.4	91	76	8	7	5.6	● a. p. ⊤ p.
20	33.7	23.3	94	56	6	8	15.7	☌ a. ☐☿ ● ∩ p.
21	32.4	22.1	91	80	4	8	28.5	● a. p.
22	32.9	22.6	97	65	5	5	------	≡ a. ☿ p.
23	31.5	23.9	93	65	7	6	8.6	☌ a. ⊤ ☾ ● p.
24	28.5	23.4	96	72	8	8	.5	●° d a. p. ☾ p.
25	32	22.6	94	70	10	9	7.4	☌ a. ☐☿ ● p.
26	32.6	22.9	94	65	5	5	------	∩ ⊤ ☾ p.
27	32.8	23.8	92	65	5	6	------	☾ p.
28	31.5	23.6	95	68	6	7	------	☌ a. ☐☿ p.
29	32.6	23.7	93	68	9	8	------	☌ a. ⊤ p.
30	32.5	22.4	94	69	7	9	------	☌ a. ⊤ a. p.
31	31.6	23	95	73	5	9	------	☌ a. ☾ p.
Mean	31.9	23.1	93.6	68.2	6.6	7.2	------	
Total	------	------	------	------	------	------	151.2	

DUMAGUETE.

[ϕ=9° 18′ N; λ=123° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	21.1	91	71	8	10	------	☌ a. ⊤ d p.
2	------	21	88	78	10	10	6.2	☌ a. ● d p.
3	------	20.3	88	66	10	10	------	☌ a. ☾ p.
4	------	19.8	82	68	1	10	------	☌ a. ☾ p.
5	------	21.9	79	73	10	10	3.1	☐☿ ● p.
6	------	20	98	72	1	3	7.1	☌ a. ☾ p.
7	30	21.6	92	72	10	10	19	● a. p. ○ p.
8	32	23.3	94	73	10	6	------	☾ p.
9	32.2	23.2	85	72	1	1	------	☌ a.
10	31.9	23.4	91	66	10	4	------	☌ a. ☾ p.
11	30.4	22.9	76	73	10	10	------	
12	32.3	21.8	77	74	10	10	------	☾ p.
13	33.3	22.9	85	68	10	7	------	
14	32.8	22.2	89	61	10	8	------	d p.
15	33.2	21.6	82	61	9	10	------	☋ p.
16	33.2	21.4	76	64	1	5	------	
17	31.7	23.3	79	70	10	10	------	○ ☾ ☋ p.
18	31.9	24.6	81	67	10	7	------	○ p.
19	30.8	25.4	73	72	10	8	74.7	○ d ☐☿ p.
20	30	22	97	77	10	5	4.3	●² ○ a. ☐☿ a. p.
21	31.2	23.8	93	74	10	4	53.1	○ a. ● a. p.
22	30.4	21.8	91	74	10	2	------	● d a. ☾ p.
23	31.5	24.8	88	72	10	10	1	☌ ○ a. ☾ p.
24	31.4	24.6	95	79	10	10	------	d ○ a. ☾ p.
25	29.9	23.7	85	78	10	8	1.5	● a. ☐☿ a. p. ○
26	30.5	22.8	99	66	8	3	------	d a. ☾ p.
27	31.7	24.1	80	75	10	7	------	☐☿ a. ○ p.
28	33.4	23.5	81	61	4	9	------	☌ a. ☾ p.
29	33.6	24.1	86	54	10	10	2.4	☌ ○ a. ● ↙°° ☾ p.
30	33.6	22.4	82	49	10	8	------	☌ a. ↙°° p.
31	33.2	22	79	56	3	8	------	☌ a. d ☾ p.
Mean	31.8	22.6	85.9	68.9	8.3	7.5	------	
Total	------	------	------	------	------	------	172.4	

METEOROLOGICAL DATA, ETC.—Continued.

YAP (Western Carolines).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	23.9	91	80	9	5	------	☌ ☾° a.
2	30.9	24.6	85	77	4	7	17.3	☽ ☾ ☉ a. ● p.
3	30.4	23.2	87	81	9	4	3.6	●° a.
4	30.6	25	86	73	2	4	3.6	
5	30.8	24	94	74	8	3	7.1	● a. d a. p. ◠ p.
6	30.6	23.6	97	90	7	4	6.9	● a. p.
7	31.3	24.2	92	84	2	5	1.8	☌ a. d°a. p. ◠° p.
8	30.4	23.8	89	77	4	7	.3	◡ ² d a.
9	31.3	24.3	88	69	9	7	19.3	◡ d° ☾ ● p.
10	31.6	------	97	76	7	5	1.3	d° ☉ a. d ◠° ☾° p.
11	30.8	23.4	90	78	9	5	28.7	● a. d°a. p. ☾° p.
12	------	------	------	------	8	9	.5	☽° ☉ a. ☾ ☿° p.
13	27.5	23.6	93	91	9	9	4.1	● a. d° ☿° p.
14	30.3	23.8	84	82	6	9	1.8	◡° a. ●° ☾ ² ☿ ² p.
15	31.3	22.6	86	81	4	7	.3	☽° a. d° ◡ ☿° p.
16	31.9	24.3	84	69	5	5	.5	d° ◡° ●° p.
17	31.5	23.7	90	80	7	6	4.6	☉° a. p. ☿ ² ● p.
18	31.2	23.5	96	76	4	2	3.1	d° a. ●° ☩ ☾ p.
19	31.2	24.4	94	72	2	2	------	☿° p.
20	31.5	24.7	87	90	2	10	5.3	☽ ☉ d°a. ● ☾° ☿ ²
21	31.8	24.4	95	70	4	4	.5	d° a. p. ●° p.
22	32.1	24.9	95	69	6	3	.5	☉° a. p. ●° ☿ p.
23	31.1	24.6	93	75	4	5	------	☌ ² ☉ a. ♉ a. p. ☾
24	31.4	25.6	88	79	6	7	2.3	p a. p. ☾° ☿° p.
25	31	24.7	87	69	4	4	1.3	● ☉° a. ☾° p.
26	31.8	25	87	71	4	4	------	☌° ☉° a.
27	32.2	24.4	87	66	6	7	------	☌ a. ☾ p.
28	31.9	24.4	93	66	5	8	------	☾° d°a. ☾ p.
29	31.4	25.4	87	77	9	9	7.4	☿ a. ●° d ◪ p.
30	29.2	23.4	90	98	9	10	13.8	●° a. p. ☾° p.
31	27.8	23.8	98	99	9	10	51.8	● d a. p. ☾° p.
Mean	30.9	24.2	90.3	78	5.9	6	------	
Total	-----	-----	-----	-----	-----	-----	187.7	

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	23.2	95	81	10	10	------	☿ d° p.
2	30.6	22.8	90	77	10	10	------	d ☾ p.
3	29.5	24	85	73	10	8	------	
4	30	24.5	92	86	10	7	------	
5	31.6	24	89	75	10	4	46.7	☾ ² ●² p.
6	32	23.8	95	80	6	7	------	☌° a. ☿ ² d p.
7	32.6	23.7	93	80	10	10	------	
8	32.4	24	93	77	10	10	------	☿ d° p.
9	32.5	24.1	92	76	10	7	------	
10	32	24	95	74	10	10	6.1	d° ◪ p.
11	32.3	24	90	81	10	10	31.5	◪ ● a. p.
12	30	23	93	77	10	10	9.1	d a. ☾ ◪ ² ● p.
13	30.8	23.5	94	73	10	10	16.3	◪ ² ☾ ● p.
14	30	23.9	91	80	10	8	8.1	●° ☿ ÷ p.
15	29.9	23.6	93	80	10	10	------	
16	30.2	24.4	90	79	10	10	------	☾ ☾ ☿ p.
17	30.5	23.5	92	75	10	10	------	☿ ☾ p.
18	32	24.5	92	69	10	10	------	
19	32	23.8	91	70	8	10	------	
20	33	24.4	93	76	10	6	------	☾ ² p.
21	33.3	23.9	88	76	10	8	38.9	◡° ● p.
22	33.6	------	92	84	10	7	------	☾ ☿ ☾ p.
23	32.6	24	87	78	10	6	9.1	d ☿ ² a. p. ☾ ☾ p.
24	31.6	23.2	94	77	10	10	14.8	p a. p. ☿ ² ☾ ☾ p.
25	31.2	23.6	93	79	9	10	------	d° a. p. ☿ ² ☾ ² p.
26	32	23.6	92	76	10	7	------	
27	31.5	24.2	90	73	10	6	------	
28	32.5	25	92	79	10	8	45.7	◪ ² ☄° ●² p.
29	32.6	22.7	93	80	10	10	------	☿ ² a. p. ●° ☾ ² p.
30	30.2	23.7	87	75	10	10	------	
31	30.9	24.5	93	73	10	10	------	☿° ☾° p.
Mean	31.5	23.8	91.6	77.1	9.8	8.7	------	
Total	-----	-----	-----	-----	-----	-----	226.3	

SAN JOSE BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	23	89	74	10	10	24.6	● p.
2	29.2	22.5	85	78	10	10	1.3	● a. d° p.
3	30.4	22.6	85	80	10	10	7.4	● p.
4	30.5	24.1	91	82	10	10	------	d a.
5	31.5	22.7	87	73	1	5	------	☿ ◠ p.
6	31.2	22.9	90	72	3	2	2	◪ ● ☾ ² p.
7	31.5	22.8	90	88	10	10	27.2	◪ ●² ☾ ² p.
8	27.3	23.2	93	78	10	3	51.3	d ● a.
9	30.5	21.7	96	74	7	3	.8	●° a.
10	30.7	22.6	88	72	2	3	------	
11	31.5	23	86	72	10	7	------	◡ d p.
12	29.5	23	91	76	10	10	6.6	☾ ● p.
13	30.9	22.4	88	78	10	10	2.5	d° ☄ p.
14	28.5	23.1	95	91	10	10	57.7	● a. p.
15	29.8	22.1	95	80	10	4	1.3	●² a. ☾ p.
16	31.2	23.2	91	75	3	10	------	☾ ☾ p.
17	31.1	23	85	77	10	10	------	☾ ☾ p.
18	30.5	22.6	87	71	10	10	------	
19	31.7	22.5	90	66	8	4	------	☾ ☾ ☾ p.
20	32	22	90	67	1	4	------	☾ ☾ ☾ p.
21	31.7	23.5	88	75	4	10	.1	d ◡ ☾ p.
22	31.9	23.5	91	67	10	2	------	●° a. ◪ ☄ c p.
23	31.5	24	89	87	10	10	7.8	◪ a. ● ☿ p.
24	30	23.5	97	87	10	10	7.6	● a. p. ☿ ☾ p.
25	31.4	22.5	90	90	3	10	2	◪ ● d p.
26	31.1	22.2	91	74	4	9	4.3	● p.
27	31.1	22	90	72	7	7	------	
28	31.4	23.5	92	72	8	10	1.8	● ☾° p.
29	31.1	23.5	90	90	10	10	28	●° a. ● p.
30	30.4	23.3	92	78	10	9	1.3	● a.
31	30.4	23.5	91	82	7	10	3	● ☿ a.
Mean	30.7	22.9	90.1	77.4	7.7	7.8	------	
Total	-----	-----	-----	-----	-----	-----	238.6	

CUYO.

[$\phi = 10°\ 51'$ N; $\lambda = 121°\ 01'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.7	23.8	95	81	8	9	1.5	●° p.
2	30.1	24.1	92	77	10	9	13.7	● p.
3	30.6	23.1	96	76	8	9	20.6	●² p.
4	31.6	24.3	97	68	9	9	------	
5	32.2	24.1	94	72	7	5	2.3	●° p.
6	31.8	------	96	74	5	8	22.6	◪ ●² p.
7	30.3	23.6	98	80	8	8	40.9	● a. p. ◪ ●² p.
8	27.8	24	96	84	10	9	13.2	●² a.
9	31.9	22.5	98	70	7	7	------	
10	32	23.3	96	67	8	6	------	d° a.
11	30.2	23.6	95	77	7	7	------	◠ a.
12	31.2	24.2	93	76	9	9	------	☾ ◪ ☾ p.
13	33.1	25.1	93	70	8	9	------	☾ ◪ ☾ p.
14	32.9	24.8	91	75	9	8	31	●² ☿ p.
15	31.6	22	95	72	9	9	------	d° ☾ p.
16	32	25.3	89	66	7	7	------	
17	31.7	25.7	87	71	8	9	------	☉ p.
18	30.4	23.7	96	75	9	9	------	
19	32.5	24.7	94	65	9	7	------	☾ p.
20	32	26.7	80	71	8	7	28.2	●² p.
21	31.8	24.2	97	72	8	7	------	
22	30.8	27.3	82	71	9	9	------	
23	32.7	26.1	93	74	9	9	19.5	●° a. ◪ a. p.
24	31.4	24.2	97	72	10	9	1.8	● a.
25	31.7	25.1	94	74	8	8	7.4	● ☿° p.
26	31.9	23.8	96	73	8	9	58.2	●² p.
27	31.5	22.8	97	73	9	8	------	
28	32.3	24.4	94	74	8	9	------	● p.
29	32.1	24.4	95	78	8	9	------	☄ ² a.
30	32.3	24.3	86	70	9	8	1.5	d a.
31	27.9	24	93	82	9	9	20.4	● ◠ a.
Mean	31.4	24.3	93.4	73.5	8.3	8.2	------	
Total	-----	-----	-----	-----	-----	-----	282.8	

METEOROLOGICAL DATA, ETC.—Continued.

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.5	22.4	96	92	10	10	20.6	≡° a. ● ≤ p.
2	29.9	23	96	91	9	10	8.6	≡° a. ● ≤ p.
3	31.3	23	97	81	6	8	87.4	≡ a. d ●² ⌐◪ p.
4	30.7	22.6	99	86	2	8	21.6	● ⊤ ≤ p.
5	30.6	23.2	96	84	6	6	.5	≡° ◠a. ●° ⊤ ≤ p.
6	31	22.6	97	65	4	4	20.3	⊇ ≡ a. ○ ≤² ● p.
7	30.5	22.8	98	65	10	5	6.4	● ◠ a. ○ ≤ p.
8	31.2	22.9	98	77	4	8	1.1	≡ ● a. ●° ⌐◪ p.
9	33.1	22	96	68	2	3	------	⊇ ≡° ⊕ a. ○ ≤ p.
10	33.9	23.3	96	71	0	7	.4	⊇ a. ○ ⊤ ≤ ●° p.
11	30.9	23.5	97	76	6	7	.3	≡ ⌐◪ a. ●° ≤ p.
12	31.6	22	97	61	6	5	------	≡ ○ a. ≤ p.
13	32	23.3	97	66	6	5	------	⊇ ≡ a. ≤ ∪ p.
14	32.5	23.5	90	63	4	8	.8	⊇ ⊤ a. ○ ⌐◪ p.
15	29.9	24	91	72	9	9	.3	●° a. ∪ p.
16	33	22	96	55	1	3	------	⊇ ≡° a. ○ ∪ p.
17	32.4	22.5	97	67	4	4	------	○° a. ⊕ ⊤ ≤² ≤ p.
18	31.4	22.5	96	67	3	4	.3	⊇ ⊕ a. ○ ≤ p.
19	31.5	23.5	------	75	7	8	18.8	●° a. ⌐◪ ● p.
20	30.5	23.5	97	73	8	4	3.6	≡ d a.
21	31.2	23.5	97	72	5	6	15	● a. p. ⊕ ◠° p.
22	30.5	24	98	78	10	7	4.5	⊤ ● a. ○ ●° ≤ ⊕
23	31.5	23.6	98	69	3	4	------	⊇ ⊇ ≡ a. d ≤ ∪ p.
24	32	22.8	97	68	3	4	3.6	⊇ ⊇ ≡ a. ● ≤ p.
25	31.5	23	95	72	3	5	------	≡° a. ≤ p.
26	31.5	23	97	76	5	9	.3	≡ a. ⊤ ●° ≤ p.
27	32.4	22.6	97	73	10	6	.5	⊇ ≡ a. ●° ≤½ p.
28	33	23.3	97	75	3	10	2.3	⊇ ≡ a. ● ⌐◪ p.
29	33.8	22.6	97	63	4	6	------	⊇ ≡ a. ◠ ⌐◪ p.
30	34	24	95	57	4	9	13.7	⊇ a. ○ ⌐◪² ● p.
31	32.5	22.6	98	77	3	6	.5	⊇ ≡ a. ●° ⌐◪ p.
Mean	31.7	23	96.4	72.1	5.2	6.4	------	
Total	------	------	------	------	------	------	231.4	

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m	Relative humidity. 2 p. m	Cloudiness. 6 a. m	Cloudiness. 2 p. m	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	------	------	------	
2	------	------	------	------	------	------	------	
3	------	------	------	------	------	------	------	
4	------	------	------	------	------	------	------	
5	------	------	------	------	------	------	------	
6	------	------	------	------	------	------	------	
7	------	------	------	------	------	------	------	
8	------	------	------	------	------	------	------	
9	34.2	------	------	85	------	8	------	
10	32.6	25	96	72	8	9	------	
11	31.2	26.4	90	76	8	8	24.1	
12	30.2	22.6	92	90	10	10	19.4	
13	30.4	22.2	97	83	9	8	3.3	
14	30.2	23.2	94	77	7	9	26.9	
15	29.8	23.2	97	83	10	9	1.5	
16	31.2	26	97	------	9	10	------	
17	31.4	24.6	98	------	9	10	------	
18	32.8	23.5	98	------	10	8	------	
19	32.2	25.6	98	------	8	9	------	
20	31.8	25.2	98	------	8	9	------	
21	33	25.6	95	------	6	4	2.5	
22	33.4	24.8	97	47	9	7	------	
23	------	25.6	98	------	6	------	1	
24	32.8	25.2	98	------	8	7	------	
25	32.8	25.6	98	------	8	6	------	
26	32.8	25	98	74	7	8	------	
27	32	24.5	97	92	7	8	6.1	
28	31.2	24.4	98	82	8	7	2.5	
29	32.2	24.8	98	------	8	8	------	
30	31.8	25.6	98	78	7	7	------	
31	32.6	25	97	88	8	7	------	
Mean	31.9	24.7	96.7	79	8.1	8	------	
Total	------	------	------	------	------	------	------	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	21.5	91	69	9	7	------	
2	29	23	97	81	9	10	5.6	● p.
3	31.8	20	98	75	7	5	28.4	●² p.
4	29.8	------	97	80	7	7	4.1	Ω a. ● a. p.
5	32.4	22	81	70	6	3	------	
6	33.4	23	90	75	5	3	.3	
7	32	23.8	98	74	5	4	------	p a.
8	32	21.8	90	82	9	10	9.4	⊤ ● p.
9	32.5	24	97	69	5	5	------	
10	32.4	23.6	98	70	6	5	------	
11	32.4	23.9	98	75	6	5	3.3	● ⌐◪ d p.
12	31.2	22	98	75	7	5	.8	d a. p p.
13	31	24.1	98	75	10	6	------	
14	32	24.7	98	69	7	5	1.8	● ⌐◪ p.
15	31	------	88	80	8	10	------	d a. ● ⌐◪ p.
16	30	------	90	73	7	6	------	∪ p.
17	31.9	23	87	82	6	5	------	
18	33	21	90	68	6	4	------	
19	33.2	24	90	69	5	6	------	
20	33.8	24	88	64	7	5	------	
21	34	25	98	70	6	5	------	
22	33	24.2	89	74	7	4	.8	●° a.
23	32	25	98	75	4	5	2.3	● p.
24	33	23	97	64	7	5	------	
25	34.1	22.8	98	65	9	4	.3	d p a
26	33	23	97	70	6	4	------	
27	33.3	21	90	69	7	4	------	
28	33	24.2	87	64	6	5	------	
29	34	25	97	72	6	5	------	
30	34	25	98	73	7	4	------	⊤ d p.
31	33.4	23.3	87	69	6	5	------	
Mean	32.3	23.2	93.5	72.3	6.7	5.4	------	
Total	------	------	------	------	------	------	57.1	

SUMAY, GUAM (LADRONES ISLANDS).

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0.-10.	0–10.	mm.	
1	29.4	23.4	86	77	7	10	5.3	
2	30.4	23.8	86	65	10	4	9.1	
3	30.4	23.6	86	70	2	8	8.9	
4	29.8	23.8	95	77	10	8	11.4	
5	30	24	87	71	3	6	------	
6	30.6	23.8	84	74	4	10	6.4	
7	28	23.8	92	83	10	10	13.9	
8	29.4	23.8	92	75	5	7	------	
9	30.4	23.4	88	74	10	6	.8	
10	30.4	23.4	88	62	10	10	.8	
11	30	24.4	85	71	5	9	1.3	
12	31	24.6	85	62	10	3	------	
13	30.4	23.6	80	64	4	8	.8	
14	30.4	23	84	69	2	5	------	
15	31.4	23.2	80	64	1	2	------	
16	29	22.8	92	66	8	10	------	
17	29.4	23.2	84	80	10	8	5.1	
18	30.8	23.2	84	65	2	4	1.3	
19	31.6	23.8	84	64	2	5	------	
20	31.6	26.4	83	59	2	7	------	
21	31.6	24	84	66	2	4	------	
22	30.8	23.8	84	67	1	10	------	
23	30	26.4	81	78	10	9	6.4	
24	30	23	92	81	10	9	22.9	
25	30.6	23.4	86	82	7	10	11.4	
26	27.4	23.4	95	84	10	10	39.4	
27	27.2	22.8	91	77	10	10	38.1	
28	29.8	23	95	71	10	10	35.6	
29	29.4	23.6	90	72	10	10	1.5	
30	29.8	24.8	87	80	10	10	7.9	
31	29.8	24.8	92	78	8	8	29.4	
Mean	30	23.8	87.2	71.9	6.6	7.7	------	
Total	------	------	------	------	------	------	257.7	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.4	22.8	91	77	10	10	18.8	☥ ● p.
2	31	22.9	96	90	10	10	19.1	p ☥ d p.
3	31.2	22.5	97	72	10	10	8.6	☈ ●° p.
4	31.6	22.4	94	66	10	9	------	
5	32.1	22.2	94	68	10	10	1.8	☈ d° p.
6	32.8	22.5	96	65	8	5	.8	p ☈ p.
7	32.4	23.4	87	65	9	9	.8	☈ p.
8	31.3	23.5	91	76	10	10	1.3	p a. p. ☈ p.
9	31.6	22	94	68	9	4	------	
10	31.7	21.5	88	71	7	5	------	
11	31.2	21.5	90	67	10	4	------	☈ p.
12	30.5	22.5	87	76	10	8	------	
13	32.1	23	86	73	10	10	------	p p.
14	32.1	22.5	90	62	10	10	------	
15	31.9	23.2	90	67	10	10	------	d° a.
16	32 2	24.2	92	69	10	10	------	☋ ☋ p.
17	32.5	23.4	92	66	10	10	------	☋ ☋ ☋ p.
18	32.6	22.8	92	63	10	10	------	☋ p.
19	33	22.5	84	59	8	8	------	☋ p.
20	28.6	24.3	96	89	10	10	49.2	●° a. ●² ☈ p.
21	31.7	22.4	97	73	8	8	2	☽ ⊕ p.
22	32.1	26	92	69	9	9	3 3	● a. p p.
23	32.4	24.4	96	60	10	8	4.8	●° a. ☥ p.
24	32.4	23.7	92	66	10	8	.5	p ☈ p.
25	33.2	23.8	91	54	4	3	------	☥ p.
26	32.8	23	86	67	4	4	------	☥ p.
27	32.7	22.5	83	64	4	4	------	
28	31.1	22.6	90	75	4	9	------	☥ p.
29	31.6	23	89	70	8	9	------	
30	32.7	23	97	63	10	10	------	☥ ☇ p.
31	32.6	23.6	92	69	10	9	------	☈ p.
Mean	31.9	23	91.4	69	8.8	8.2	------	
Total	------	------	------	------	------	------	111	

VIRAC.

[ϕ=13° 35 N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	23.4	97	82	9	9	4.6	● a.
2	30.5	23.5	97	80	9	9	.5	●° ☇ p.
3	31.8	22.9	96	78	9	5	10.7	♌ a. ● ☈ p.
4	31.2	23.4	97	77	7	6	16.5	● ☈ p.
5	31.6	23.5	96	75	7	4	1.3	☽ ⊕ ☇ p.
6	31	23.2	95	73	7	3	.5	d² ☥ ☠ a. ☇ p.
7	31.8	22.9	96	74	6	8	------	♌ a. ☇ p.
8	31.3	22.7	96	68	9	6	------	☈ d p.
9	32.7	23	96	60	5	4	------	☇ p.
10	33.5	23	94	66	3	6	------	♌ a.
11	32.9	24.4	92	63	9	8	3.6	☈ ● p.
12	32.3	23.5	96	69	10	8	4.1	●² ☈ ☈² d p.
13	31.8	23.4	94	74	10	8	10.4	● a. ☈ ☈² ●² p.
14	31.5	22.3	96	76	4	10	.8	☥² ☇ p.
15	29.5	23.2	95	83	10	10	3.6	●° a. ↙° ● p.
16	31.4	24	92	67	10	9	------	☋ ☋ p.
17	32	23.8	97	78	9	9	------	♌ a. ☋ ☋ p.
18	31.4	22.9	96	77	10	4	------	♌° a.
19	31.5	22.3	97	85	5	9	17	♌ a. ● ☠³ p.
20	31	22.6	96	83	8	8	1.8	●° a. d a. p.
21	31.8	24.4	91	------	6	4	2.6	●° a. d p.
22	32.8	24.3	96	------	8	7	------	● ☠ a. ☇ p.
23	31.4	23.4	96	88	5	9	14.7	♌ ☽ ● a. ● ☇ p.
24	32	23.3	96	------	2	7	------	⊕ d° p.
25	32.3	23	96	------	2	7	------	♌ a.
26	31.8	21.7	95	------	3	6	------	♌ a. ☇ p.
27	33.4	22.4	94	------	5	4	------	☽° ♌ a.
28	33.5	23.6	94	------	7	4	.5	☇ d p.
29	32.7	24	93	------	9	7	------	☇ p.
30	34	24.4	92	------	8	6	------	☇ p.
31	34	23.6	96	------	7	8	------	☈ p.
Mean	31.9	23.3	95.2	75	7	6.8	------	
Total	------	------	------	------	------	------	93.2	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.9	22.2	97	100	9	10	49.5	● p.
2	32.2	22	99	92	10	10	------	d p.
3	33.1	22.1	98	------	8	9	1.5	☥° ●° p.
4	32.4	22.2	98	82	8	8	.3	p° p.
5	33.4	21.6	97	82	9	8	3.8	p a.
6	34.3	21.9	98	------	5	7	------	
7	33.5	21.6	99	------	3	7	1.3	≡° a. p° p.
8	33.1	22.5	98	------	6	8	------	
9	33.1	21.8	97	------	8	6	------	
10	33.6	22.4	97	------	8	8	------	
11	33.5	22.8	97	------	8	8	------	d p.
12	33.8	22	98	------	10	9	29.5	d a. ● ☈ p.
13	33	21.6	98	------	10	9	2.7	d a. p. p p.
14	32.1	22.5	97	------	8	10	2.5	
15	30.2	22.5	99	91	10	9	13.8	d a. ● ☥° p.
16	32	22.4	98	------	10	9	.3	d p.
17	32.8	23.1	97	------	9	9	------	
18	34	22	98	57	10	9	------	
19	33.7	20.7	96	55	5	8	------	
20	33.9	22.8	93	87	9	10	4.7	● p.
21	33.7	21.7	97	73	7	8	------	≡° a.
22	33.8	22.2	98	81	9	10	9	p d p.
23	32.9	21.9	98	70	5	8	2.3	p° a.
24	34.8	22.6	95	66	7	6	------	
25	33.7	21.5	96	57	2	6	------	
26	33.9	20.2	98	52	3	4	------	
27	34.5	20.2	96	58	5	6	------	
28	34.8	22.9	95	63	8	7	------	
29	33.6	22.4	93	66	10	9	14.9	
30	33.3	23.6	95	60	9	7	------	p a.
31	33.5	23.2	97	58	9	9	------	
Mean	33.3	22.1	97	71.1	7.6	8.1	------	
Total	------	------	------	------	------	------	136.1	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	22.6	97	72	7	7	------	
2	31.7	23.2	96	80	6	9	4.1	☥ ● p.
3	31.6	22	97	71	9	7	9.9	d a ● p.
4	31.8	22.5	97	72	7	7	------	☇ p.
5	32.3	23.6	95	78	7	7	------	☇ p.
6	32.4	22.5	97	66	4	5	.3	d a. ☥ p.
7	32.7	23.5	97	64	4	5	------	
8	32.8	22.9	97	66	5	6	2.3	☥ ● p.
9	33.7	22.8	97	63	3	6	------	
10	33.4	22.5	96	61	4	4	------	
11	33.8	23.8	97	63	6	4	------	
12	32.3	25	97	62	7	7	------	d a.
13	33.3	22.8	92	84	7	9	13	☇ a. ☥ ● p.
14	32.2	23.1	89	66	7	7	9.9	☽ a.
15	31.3	22.3	97	79	10	7	2.8	● a. p.
16	32.1	23.3	93	70	7	10	------	☋ p.
17	32.3	23	94	65	7	7	------	☽ p.
18	32.5	22.3	97	62	5	7	------	☥ p.
19	34.4	22.3	97	52	5	4	------	
20	30.8	23.5	92	68	10	9	------	
21	34.7	23	93	49	5	5	------	
22	34	23.3	92	85	5	10	3.3	d ☥ p.
23	34.4	23.2	96	61	4	7	1.3	☥ ● p.
24	33.1	22.7	96	84	5	9	10.5	● ☥ p.
25	33.4	22.3	97	66	3	7	------	☇ p.
26	34.8	22.2	96	69	4	5	------	
27	33.6	22	94	60	2	3	------	
28	34.4	23.7	92	63	6	7	------	☽ p.
29	33.3	24	95	64	7	7	5.1	● a.
30	34.6	23.3	95	66	3	7	------	☇ p.
31	32.4	25	80	64	8	7	------	↙° ☇ p.
Mean	33	23	94.7	67.6	5.8	6.7	------	
Total	------	------	------	------	------	------	62.5	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	19.8	97	64	9	7	4.1	♌≡a.●°a.p. ☿°
2	29.9	20	96	63	3	5	------	≡° a.
3	29.8	20	97	63	7	8	4.8	≡ a. ☿° ●° p.
4	29.3	19.8	97	64	5	8	19.3	≡ a. ☿² ●² p.
5	30.2	20.8	97	65	10	9	14	●° p.
6	30	20.1	97	64	9	8	------	☌° a. ☿² p.
7	30.6	20.5	97	64	2	9	2.5	≡ a. ☐♃°☌ p.
8	29	19.9	97	66	7	9	42.4	≡ a. ●² ☿° p.
9	30.8	21.5	96	64	2	7	------	≡° a. ☌° p.
10	31	21.2	96	63	3	8	------	♌ ≡° a.
11	31.3	21.7	96	62	2	7	------	
12	30.5	22	96	65	2	3	------	♌ ≡° a.
13	27.8	21.7	97	70	10	10	66.5	●² p.
14	28.1	21.3	97	69	7	8	5.3	♌ ≡ a. ☌ ●° p.
15	27.6	19.8	98	68	10	10	46.5	●² p.
16	28.2	19.4	97	67	9	7	------	♌ ≡ ☌° a. ☿° p.
17	28.5	19.5	97	66	6	8	------	≡ a.
18	28.7	19.7	98	66	4	9	16.3	●² p.
19	28.4	19.3	98	66	7	8	9.1	●° ☿° p.
20	27.2	20.1	97	71	10	8	8.4	●° a. p.
21	28.6	20.4	96	66	7	8	------	♌ ≡° a. ☌ ☿² p.
22	29.2	20.1	97	66	3	3	------	♌ ≡ a.
23	30.2	21.2	97	66	2	6	------	☐♃ p.
24	31.2	21.6	98	61	7	8	------	☿° ☌° p.
25	30.9	21	97	62	5	7	------	♌ ≡ a.
26	31.8	21.1	98	60	3	8	------	☿° ☌° p.
27	31.2	21	98	62	2	5	------	≡ ☌° a.
28	31.3	21.4	97	61	3	7	------	☌° p.
29	31.5	21.6	98	60	8	7	------	♌ ≡ ☌° a.
30	31.6	21.2	98	60	2	2	------	≡ a.
31	31.9	21.1	97	60	7	8	------	☐♃ p.
Mean	29.9	20.6	97.1	64.3	5.6	7.3	------	
Total	------	------	------	------	------	------	239.2	

SANTA CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	------	------	------	
2	------	------	------	------	------	------	------	
3	------	------	------	------	------	------	------	
4	------	------	------	------	------	------	10.2	☐♃ ● p.
5	33.3	22.2	97	78	9	9	------	☌ ☿ p.
6	33.2	21.9	96	82	3	5	.1	♌²≡°a.☐♃°☌p.
7	34.1	22.3	97	63	2	6	------	♌²≡°a.☌°☐♃°p.
8	34.7	21.4	96	71	7	9	------	♌² ≡ a. ☿°☌⊕p.
9	33.6	21.4	97	66	3	5	------	♌ a. ☿ ☌° p.
10	34	23.1	95	60	3	4	------	♌ ≡ a. ♃° p.
11	33.7	23.1	95	63	4	6	------	♌² a. ♃° p.
12	33.8	24.1	96	62	8	8	.2	♌≡°●°a.♃°◯²p
13	33.5	23.4	96	93	8	9	14	♌°d a. ●° ☿° p.
14	33.1	23.2	97	69	9	9	2.3	●☿°♃a.◯°☿°p
15	32.6	23.6	97	85	10	9	9.9	●d a. ☿° d p.
16	30.3	22.7	98	86	9	9	6.7	≡●° a.●◯°d p.
17	31.5	22.3	98	71	9	7	------	♌≡a.◯♄♉ p.
18	33.1	21.5	97	57	7	8	------	♌² ≡² a. ◯ ♉ p.
19	33.9	21.5	93	54	2	3	2.5	♌² ≡ a. ♉ p.
20	33.2	22.5	94	76	9	9	1.3	≡°●°a d♃♉°p.
21	31.6	22.3	97	74?	6	7	------	♌² ≡ a. ◯° p.
22	32.9	23.5	95	84	4	10	38.9	♌ ●°a. ☐♃ ●²p.
23	31.3	22.2	97	76	2	7	5.1	● a. p. d ♉ p.
24	32.9	22.4	95	66	4	8	------	≡° ◯° a. d ♃ p.
25	34.8	22.5	92	53	1	2	------	♌ a. ♃° ♉ p.
26	34.6	22.1	95	61	2	4	------	♌ ≡ a. ☿° ♃ p.
27	35.2	22	97	58	1	3	------	♌ a.
28	34.5	23.4	95	74	8	9	------	♌≡°◯°a☿°♃°p
29	34.4	22.1	97	66	8	8	------	♌° ≡ a.
30	34.3	22.3	97	67	8	8	------	♌° ≡² a. ☿° ♃ p.
31	34.2	24.2	92	65	10	7	13.2	♌° ● a. ☿ ♃ ●p.
Mean	33.4	22.6	95.9	69.6	5.8	7	104.4	
Total	------	------	------	------	------	------	------	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	10	9	6.9	≡² a. ☿ ♃ ● p.
2	------	------	------	------	9	7	2	♌° ≡ a.●° ☿ p.
3	------	------	------	------	6	7	.8	♌° a. ☐♃ d p.
4	------	------	------	------	9	8	2	♌° ≡° a. ♃ ● p.
5	------	------	------	------	9	6	------	♌ ≡ a. ♃ p.
6	------	------	------	------	2	9	6.7	♌≡∞a. ⁞ ● p.
7	------	------	------	------	2	8	24.9	♌ a . ∞ ☐♃● p.
8	------	------	------	------	5	5	------	♌ ≡ a.
9	31.3	22.3	------	------	5	8	------	♌ ≡² a.
10	31.2	23	93	69	9	6	1.3	d a. p. ♃ p.
11	31.4	22.8	94	65	6	5	------	♌° a. ☐♃ p.
12	30.7	22.8	90	71	10	9	4.8	♌° a. ● p.
13	31.2	21.4	94	97	10	10	7.9	♌ a. ● ☿ p.
14	28.9	22.8	94	92	10	10	67.1	♌² ● ☿ a. ●² p.
15	28.7	22	96	89	10	10	10.6	≡° a. ● a. p.
16	22.9?	20.7	89	95	10	10	73.4	d a ● p.
17	29	20.5	92	95	10	8	3.8	d° ●° a. ♉ ♉ p.
18	31.9	22.3	94	60	9	9	------	♌° a. ◯ ⊕ ♉ p.
19	32.4	22.5	85	66	3	7	------	♌ a. ☿ p.
20	26.9	21.8	84	88	9	9	4.9	● a. ⊕ ♉ p.
21	32.3	21.6	95	65	7	8	------	♌≡° a.
22	31.2	22.4	90	72	3	9	4.3	♌° a. ☿ ●° p.
23	31.7	21.6	96	92	4	9	------	♌ ≡° a. ☿ ☌° p.
24	32.3	21	89	88	6	7	.7	♌ a. ☐♃ d p.
25	33	21.4	96	70	2	7	·2	♌ ≡° a. ♃ d p.
26	33.2	21.8	89	64	2	7	------	♌ a. ☐♃ d p.
27	32.8	22.9	95	64	2	8	------	♌° ≡° a.∞ p.
28	31.9	22.9	72	70	7	8	.1	◯ ☐♃ d ∩ p.
29	31.8	22	97	66	7	6	------	♉ ♌ ≡ a. ◯ ⊕ p.
30	32.1	22.1	96	72	9	8	11.9	♌ ≡° a. ♃ p.
31	31.3	22.1	95	69	9	5	.5	● ≡° a.
Mean	30.9	22	91.6	76.3	6.8	7.8	------	
Total	------	------	------	------	------	------	234.8	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a.m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27.4	22.7	94	90	10	10	17.8	d° a. ● a. p.
2	29.7	22.4	86	85	10	10	21.5	d° a.● p.
3	31.1	22.6	94	68	10	10	2.9	●° d a. p.
4	30.4	22.9	88	74	10	10	5.7	☐♃ a. ♃ ● p.
5	32	22.9	91	67	10	9	13.1	d ☐♃ ● p.
6	32.4	22.8	93	69	8	9	------	◯° a. p. ☿ ♃ d p.
7	32.2	23.2	96	64	10	9	------	☐♃ d p.
8	31.8	22	95	64	4	4	5.5	☿ ● ♃ p.
9	31.7	22.1	97	91	3	10	30.7	☐♃° ● a. p.
10	31,7	22	97	73	9	9	1.3	●° a.
11	31.8	22.9	95	77	4	9	3.8	d p.
12	32.2	22.9	91	69	10	6	8.6	● a. p. ◯ ♃ p.
13	31.9	23.5	95	69	10	9	.8.7	☐♃ a. ◯ a. p. ☿
14	31.4	24	96	69	10	10	23.3	● a. p. ☐♃ p.
15	31.5	22	96	91	10	10	27.9	● a. p. ☿ p.
16	32.5	21.5	93	87	10	10	74.7	☿ ●² a. p.
17	32.7	21.5	94	77	10	10	40.7	●² a. ☿ ● a. p.
18	30.4	22.7	96	75	10	10	8.4	● ☿ a. ◯ a. p. ♉
19	32.1	21.7	96	63	1	2	------	☐♃ ∩ d p.
20	29.3	22.9	96	80	4	10	.3	d a. p. ♉ ♃ p.
21	32.9	21.6	95	73	3	10	------	◯ a.
22	32.1	22.5	96	70	1	9	.4	d° ☐♃° p.
23	32.5	22.8	94	76	9	6	------	☐♃ ∩ p.
24	32.2	22.7	95	82	4	8	2.5	● ☿ ♃ p.
25	32.6	21.7	94	66	4	4	------	☐♃ p.
26	32.6	22.4	94	75	5	7	------	☐♃ p.
27	32,6	22.1	98	69	2	6	------	☿ p
28	32.2	21.8	96	72	4	5	------	♌ a.
29	32.4	21.2	96	65	6	9	------	♌ a. ◯ p.
30	31.2	23	92	82	9	10	49.1	∩ a. ☐♃ ● a. p.
31	31.1	23.2	93	73	10	10	71.4	● a. p.
Mean	31.6	22.5	94.3	74.4	7.1	8.4	------	
Total	------	------	------	------	------	------	418.3	

[1] 28 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.1	23.8	97	89	10	10	3.1	☌ a. ● d ┬ p.
2	31.4	22.6	97	90	10	9	6.9	☌ a. d ● p.
3	32.8	22.6	96	69	10	9	------	d° a. ◠ p.
4	33.2	22.9	96	61	10	8	------	☌ a. ◟ p.
5	33.7	23.8	96	72	9	10	20.1	☌ a. ◪ ● p.
6	34.6	22.2	97	62	4	9	------	☌ a.
7	36.1	24.2	95	56	5	9	12.2	☌ a. ● ◠ p.
8	34.8	21.9	96	64	4	7	13.7	☌ a. ┼ ● d p.
9	33.6	22	96	83	5	8	3.6	☌ a. ┼ ● p.
10	34.3	22.5	96	65	9	9	2	☌ d a. ● p.
11	34.6	22.5	95	59	3	4	------	☌ a. ●° p.
12	35	23.5	96	58	10	8	25.9	☌ a. ● ◪ p.
13	33.7	23.1	97	59	10	10	12.4	☌ a. d ● ∞ p.
14	33	23.2	94	71	5	9	11.2	☌ a. ┼ ● p.
15	31.6	22.7	97	57	10	10	21.1	☌ a. ● d p.
16	29.9	22.3	96	81	10	10	3.6	☌ a. d° ● p.
17	26.7	22.6	97	82	10	10	14.3	d a. p.
18	32.3	22.3	96	79	5	7	-----	☌ a.
19	34.9	22.4	96	59	3	7	------	☌ a. d° p.
20	26.2	23.5	95	94	9	10	4.3	☌ d a. ☋ p.
21	32.6	21.4	96	69	9	4	------	☌ d° a. ∞ p.
22	34.4	22.6	96	64	1	9	------	☌ a. d° p.
23	33.8	23	96	57	3	9	20.3	☌ a. ● p.
24	35.8	22.8	96	56	4	5	27.4	☌ a. ● ◪ p.
25	35.8	22	94	56	4	2	------	● a. d° p.
26	36	23.1	96	55	4	2	------	☌ a.
27	36	23.2	95	63	3	9	5.1	☌ a ◪ ● p.
28	34.4	22.7	96	60	3	8	------	☌ a.
29	34.8	21.2	96	56	7	8	------	☌ a. ┼ ◟ p.
30	34.7	23	97	54	3	9	6.4	☌ a. d ┼ ◟ ● p.
31	34.5	23	98	60	5	8	------	☌ a.
Mean	33.4	22.7	96	66.5	6.4	7.9	------	
Total	------	------	------	------	------	------	213.6	

BALER.

[ϕ=15° 40′ N; λ=121° 34′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	23.6	96	82	10	10	17.8	⊕ ● p.
2	------	22.3	96	81	10	10	5.8	◪ ● p.
3	------	22.6	94	79	10	9	21.6	◠ ● ◟ p.
4	------	23.4	97	81	10	10	8.4	◪ ● p.
5	------	23.3	94	88	10	10	------	┼ p.
6	------	22.5	88	59	10	10	------	⊕ a. ∞ p.
7	------	23.7	88	66	7	6	3.8	⊕ ◪ ● p.
8	------	22.1	88	60	9	9	------	⊕ p.
9	------	23.7	68	58	10	3	------	
10	------	23.1	------	61	7	10	------	⊕ p.
11	------	25.4	82	68	9	10	1.8	┼ a. p. ● p.
12	------	25	82	59	10	10	------	◪ p.
13	------	25	98	59	10	10	------	◪ p.
14	------	25	79	62	10	10	------	┼ p.
15	------	23.9	82	64	10	10	------	⊕ p.
16	------	25	82	68	10	10	1	⊕ ● p.
17	------	23.5	83	72	10	10	------	◡ p.
18	------	22.7	89	63	10	10	------	⊕ ◡ p.
19	------	22.3	93	68	10	10	------	⊕ p.
20	------	22.5	94	96	10	10	22.4	● ┼ p.
21	------	22.1	96	76	10	10	------	┼ a.
22	------	23.5	96	72	10	10	------	
23	------	23.4	93	71	10	10	3.6	⊕ ● p.
24	------	23.5	95	70	10	10	------	⊕ p.
25	------	23.5	93	66	10	2	------	⊕ p.
26	------	23.1	94	66	10	10	------	┼ ⊕ ◡ p.
27	------	23	93	67	10	10	------	
28	------	23	86	54	10	10	------	⊕ p.
29	------	23	83	53	10	10	------	◟ p.
30	------	23.6	78	64	10	10	------	◟ p.
31	------	23.7	84	58	10	10	------	⊕ ◟ p.
Mean	------	23.4	88.8	68.1	9.7	9.3	------	
Total	------	------	------	------	------	------	86.2	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.6	25.2	80	64	10	10	------	
2	32.8	24	85	64	3	8	------	
3	33.9	22.5	92	61	2	3	33	◪² ●² p.
4	33.8	23.9	92	61	5	3	1.5	●° p.
5	32.9	23.4	90	75	8	10	------	d° p.
6	32	23.7	89	62	10	2	------	d° p.
7	32.1	23.8	92	77	1	9	------	┼° d° p.
8	------	21.9	89	70	2	3	------	
9	------	------	------	------	------	------	------	
10	------	------	------	------	------	------	------	
11	------	------	------	------	------	------	------	
12	32.4	23.3	------	97	------	10	25.4	●² p.
13	31.7	23.2	83	76	9	10	------	d° ◟² ◡² p.
14	30.5	23.6	93	92	10	10	3.8	●° p.
15	29.7	22.6	93	75	10	10	31.7	d° ●² p.
16	28.2	21.8	91	81	10	10	59.7	●² p.
17	28.2	22	96	80	10	10	1.5	●°a. ◯° ☋² ◡² p.
18	31.8	23.9	89	68	10	10	------	◡° p.
19	31.8	23.7	94	67	2	2	------	d° p.
20	29.8	22.4	93	79	1	10	------	d° ◠² ◡² p.
21	31.3	21.6	96	69	2	3	------	
22	31.9	23.6	97	73	1	3	------	
23	32.9	23.9	93	65	2	1	------	
24	33	23.9	92	61	1	2	------	d° p.
25	32.6	23.6	92	65	1	3	------	
26	32.8	24.3	91	66	1	1	------	◠° p.
27	32.6	23.6	90	69	2	2	------	
28	32.6	23.4	87	66	3	3	------	d° ◟° p.
29	32.7	22.7	89	62	1	3	------	┼° p.
30	34.2	23.1	86	60	2	3	------	
31	32.1	24.6	88	63	10	10	------	
Mean	32	23.3	90.4	70.3	4.8	5.9	------	
Total	------	------	------	------	------	------	156.6[1]	

ECHAGUE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.2	23.5	93	63	10	10	------	⊕°a. ┬°a. p. ◯° ◟°
2	33.9	22.6	97	52	8	7	------	⊕²a. ┬°a. p. d° ◟°
3	34.8	21.8	97	53	5	8	9.9	┬° a. ●° ◪° p.
4	31.2	22.7	99	69	8	10	1.8	◯°a. ┬°a. p. ◟ p.
5	33.4	23	98	60	10	8	------	●° ◯°a. ┬° ◟ ☋ p.
6	37.5	22	98	55	7	9	------	☌° ◯°a. ◠° ◪ p.
7	38.4	23	97	55	4	7	1.8	◯° a. p. ◪ d² p.
8	38.8	21.4	99	55	10	3	39.6	≡²a. ◪° ◞° ●² p.
9	38.9	21	99	53	2	1	2.3	◪° d² p.
10	36.5	23	96	57	4	6	------	◪° p.
11	34.3	21.7	96	55	3	8	41.1	┬° ◯° a. p. ◪ ●²
12	36.1	21.1	99	62	5	4	4.8	≡²◠° a. ◪° ●° p.
13	33.2	22.5	97	57	8	8	------	◯° ⊕²a. ◯² ◪° p.
14	31.6	22.3	97	65	10	10	9.9	◯° a. ┬° ●° p.
15	31.2	22.5	100	68	10	10	8.6	d a. ┬° ●° p.
16	25.8	22.5	97	95	10	10	6.6	d² a. p.
17	29	22.4	100	72	10	10	.3	d° ≡² a. ◡² p.
18	33.8	21.6	96	60	10	10	------	◯² a. ◯° ◡² p.
19	35.3	22.5	93	56	4	4	------	☌²a. ◠° ◪° ◡² p.
20	30	24.1	96	70	9	10	22.1	☌ °a. ●² ◪° p.
21	36.2	21.6	98	60	8	4	------	┬° a.
22	32.9	22.5	97	62	6	9	------	☌²a. ◠° ◟° ☋° p.
23	39.6	22.3	95	52	2	2	------	☌² a.
24	38.3	23.6	98	57	2	2	------	◠° ◪° p.
25	39.6	23	96	56	7	2	------	☌² a. ◪° p.
26	38.5	23.1	97	56	2	2	------	☌° a. ◪° p.
27	34.8	23.7	97	54	2	7	------	┬° a. p.
28	36.3	24.4	93	55	7	8	------	◯° a. p. ◪° p.
29	36.1	23.1	96	58	4	10	3.3	☌° ◯°a. d² ◪° p.
30	35	22.3	97	49	4	4	.3	◯° ◪° d° p.
31	33.3	22.2	97	60	10	10	19	◯² a. ◯° ◪° ●° p.
Mean	34.8	22.5	96.9	59.7	6.5	6.9	------	
Total	------	------	------	------	------	------	171.4	

[1] 27 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.2	25.8	84	74	10	10	1.3	☐☿² p p.
2	30.7	24	84	69	3	9	17.8	☌ ☿° ● p.
3	30	24.2	87	78	4	10	32	☿° ☌ ● p.
4	30	24.4	87	75	8	9	14.2	☿° ● p.
5	30.3	24.4	89	74	9	9	21.6	☿° ● p.
6	30.4	24.8	88	68	10	10	1.8	☌ p ↘ p.
7	30.5	25.2	80	73	3	8	16.3	☿° ☌ ↘ p p.
8	30.5	23.9	88	74	7	4	------	◠° p.
9	30.9	23.9	88	68	1	5	------	♌² a. ☌ ↘ p.
10	30.4	25.1	80	68	5	9	1	♌ ◠ ☿° a. p p.
11	30.3	26.1	82	67	8	10	------	◠° a. ☌ p.
12	29.5	25.2	80	72	7	10	------	☌° a. p.
13	29.2	24	83	77	9	9	3	♌ ☿° ☌ a. p ↘ ☌
14	30.7	25.5	78	70	10	10	6.1	☌ p p.
15	28.7	24.6	83	68	10	10	49	● p.
16	27.2	22.9	85	82	10	10	158	● a. p.
17	26.8	22.5	89	76	10	10	18.6	● a. p.
18	30.5	23.5	84	65	9	9	------	
19	30.8	25	83	71	0	2	1	♌² a. ☿° p p.
20	30.2	23.9	83	68	4	9	8.6	♌² a. ☌ ☿° ●² p.
21	30.7	23.5	83	70	4	2	------	♌ a. ☿° ◠° ↘ p.
22	31.7	25.9	84	70	0	1	------	♌² a. ☿° ☌ p.
23	32.1	26	82	65	0	1	------	♌² a. ☿° p.
24	32.4	25.7	82	65	0	0	------	♌² a. ☿° ↘ p.
25	32.4	25.5	78	66	1	2	------	♌² a. ☿° ◠° ↘ p.
26	32.4	25.1	80	66	1	0	------	♌² a. ↘ p.
27	32.4	26	83	67	1	3	------	♌² a. ↘ ☌ d° p.
28	31.8	25.5	83	62	2	8	------	♌² a. ↘ ☌ d° p.
29	31.9	24.4	84	64	1	4	------	♌² a. ↘ p.
30	32.4	24.5	79	60	9	4	------	♌² a. ↘ p.
31	31.8	27	77	57	9	10	------	d a.
Mean	30.6	24.8	83.2	69.3	5.3	6.7	------	
Total	------	------	------	------	------	------	350.3	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6. a m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.3	24	97	75	8	9	27.9	☐☌ ● p.
2	32.7	22.8	97	71	2	4	15.5	♌² a. ☐☌ ● p.
3	31.2	22.7	98	75	3	7	66.5	♌² a. ☐☌² ●² p.
4	32.5	23.9	97	73	9	10	37.6	☐☌² ● p.
5	32.9	23.5	97	68	9	9	42.2	● a. ☐☌ ●² p.
6	32.4	23.7	91	70	10	10	------	
7	33.2	24.6	92	74	3	6	------	◠ a. d° p.
8	32	23	92	71	1	6	------	
9	32.4	23.7	87	72	0	5	------	↘ p.
10	31.9	23.6	86	75	2	10	------	
11	33	23.8	90	69	1	4	------	♌° a. d p.
12	29.5	23.6	90	81	8	10	1.5	d² a. ◡² p.
13	30.8	23.4	89	82	7	10	4.6	d a. ● ☿ p.
14	31.7	25	93	72	10	10	10.9	d a. ● a. p.
15	29.1	23.4	92	81	10	10	70.6	● a. p.
16	25.8	22.8	96	86	10	10	85.6	d a. p. ●² p.
17	25.6	22.6	90	91	10	10	21.1	d² a. p.
18	31.2	22.5	87	69	10	10	------	◯² ◡ p.
19	32.7	22.9	95	72	0	2	------	♌² a. ☿ d° p.
20	33.8	22.2	99	72	0	9	------	♌² a.
21	32.3	24.5	93	75	4	6	------	♌ a.
22	32.4	25.3	88	74	7	6	------	♌ a.
23	33.2	25.5	98	69	5	4	------	♌² a. ☿ d° p.
24	33	23.3	87	71	4	5	1	♌² a. ☐☌ ● p.
25	33.1	23	97	74	0	4	------	♌² a. ☿ p.
26	33.3	23.1	91	70	0	4	------	♌² a. ☿ p.
27	33.2	23.5	87	71	0	5	5.1	♌² a. ● p.
28	32.6	23.3	94	66	0	5	------	♌² a.
29	32.8	23.6	87	64	0	6	------	♌ a.
30	33.4	23	85	65	2	8	5.1	p. p.
31	31	24.5	93	71	10	10	------	● a.
Mean	31.8	23.6	92.1	73.2	4.7	7.2	------	
Total	------	------	------	------	------	------	395.2	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Tempara-ture. Maximum.	Tempara-ture. Minimum.	Relative humidity 6 a. m.	Relative humidity 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.9	25.2	81	72	7	3	------	● a. ↘ p.
2	31.3	25	84	89	5	8	21.7	● ☿° ↘² p.
3	30.6	25.2	88	75	8	3	18	● a. ↘° p.
4	30.8	24.5	85	77	10	10	40.5	● a. ●² ☐☌ p.
5	30.6	23	91	80	10	5	6.1	● p.
6	30.1	25.3	90	79	10	10	------	↘° p.
7	30.9	26.4	85	78	10	7	2.2	●° a.
8	30.4	27.5	83	75	4	5	------	
9	30.5	27.4	80	78	2	4	------	
10	30.5	27.4	80	74	8	4	------	
11	30.4	27.1	88	74	6	9	------	d° ◯² ◡ p.
12	30.7	27.2	85	74	7	7	------	◡ p.
13	31.2	27.4	82	81	8	10	------	
14	30.8	27.3	82	79	10	7	------	↙° a.
15	30.8	26.9	82	76	5	8	2.5	d ↘° p.
16	30.5	26.2	86	79	10	9	32.2	d ↘² ● p.
17	27.4	24.3	95	90	10	10	102.3	●² ↙° ☿ a. ● ↙° p.
18	29.6	23.8	74	72	10	10	5.3	●² a. ◯ ◡ p.
19	31.8	25.6	88	76	1	6	------	♌° a. ♌² p.
20	31.8	23.8	92	73	0	5	13.5	♌ a. d° ◠² ● p.
21	31.5	25.4	92	76	9	4	.3	● a. d ♌ p.
22	31.4	25	90	75	3	5	------	v a. ♌° p.
23	31.8	23.4	92	72	1	1	------	♌ v a. ♌² p.
24	31.9	24	93	85	4	6	------	d° ◠° a. ♌² p.
25	32	23.2	94	73	0	2	------	v a. ♌² a. p.
26	31.5	23.3	93	71	0	1	------	♌² a. p.
27	31	22.9	93	75	0	4	------	♌ v a.
28	31.2	27.2	84	74	6	1	------	p° p.
29	30.9	27.4	79	74	5	4	------	
30	30.6	27.7	77	72	7	6	------	
31	31.3	26.5	84	81	9	10	16.3	d a. p. ☿² ↘² ●p.
Mean	30.9	25.6	86.2	76.7	6	5.9	------	
Total	------	------	------	------	------	------	260.9	

SEISMOLOGICAL BULLETIN FOR JULY, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

In the Seismological Bulletin for the preceding month it was stated that a period of seismic activity in the Valley of the Agusan River had commenced toward the end of the month, of which an account would be rendered in the Bulletin for July. The said period extended from June 26 to July 10, with a slight recrudescence lasting July 17 to 21. The greatest number of shocks, including all the severest, took place on July 2 and 3. The epicenter lay in the northern part of the valley, between Talacogon and Butuan, which latter place lies about 50 kilometers north-northwest of the former. The seat of the disturbance must have been at a very shallow depth, since even the severest shocks of this period (degree VI) were perceptible only within an area having a radius of a little more than 60 kilometers. The principal data on which is based our report on these disturbances, have been received from Butuan and Talacogon, which two stations agree almost perfectly as to the number and intensity of the shocks felt during the period. On the other hand, it is certain that no quake whatever has been felt at Surigao which is 130 kilometers northeast of the epicenter, nor at Veruela, a town some 70 kilometers to the south thereof, in the same Valley of the Agusan.

2, $13^h\ 38^m\ 1^s$.* **Valley of the Agusan River** (E of Mindanao). Earthquake of intensity VI and very long duration ($1^m\ 20^s$?), accompanied by subterranean noises. Less intense repetitions occurred at $14^h\ 5^m$, $14^h\ 28^m$, and $16^h\ 5^m$. It was registered by the seismographs of Manila, Zikawei, Tsingtau, and, probably also by those of Osaka.

3, $9^h\ 59^m\ 13^s$.* **Valley of the Agusan River** (E of Mindanao). Oscillatory earthquake of intensity VI, duration 50 seconds. This principal quake was preceded by two others of intensity IV and III at $1^h\ 47^m$ and $8^h\ 58^m$ respectively. At $13^h\ 25^m$ and $19^h\ 35^m$ occurred aftershocks of intensity III and two others of at least force II. Up to July 10, when the principal seismic period terminated, the following two earthquakes were felt in the same district:

8, $6^h\ 10^m$. Oscillatory earthquake of intensity III.

10, $18^h\ 40^m$. Earthquake of intensity III.

In order to finish with this region we add here also the earthquake of July 17, which occurred within the same territory and was due to the same center as the preceding:

17, $20^h\ 21^m$. **Valley of the Agusan River** (E of Mindanao). Very slight earthquake of intensity II.

The earthquakes felt in other parts of the Archipelago are the following:

6, $6^h\ 29^m$. **Vigan** (NW of Luzon). Oscillatory earthquake of intensity III, lasting 3 seconds.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

10, $10^h\ 10^m$. **Borongan** (E of Samar). Oscillatory earthquake of intensity III, lasting 5 seconds.

11, $10^h\ 41^m$. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction, NNE–SSW; intensity, III; duration, 7 seconds.

13, $7^h\ 43^m$. **Tacloban** (NE. of Leyte). Earthquake of intensity III.

20, $4^h\ 39^m$. **Tacloban** (NE of Leyte). Earthquake of intensity II.

22, $5^h\ 16^m$. **Southern Samar and Leyte.** Oscillatory earthquake of intensity IV and 5 seconds duration. This disturbance was felt throughout the south and east of Samar and northeastern Leyte, an area over 100 kilometers in length. Its origin, as well as that of the preceding quakes which have been reported only by our station at Tacloban, seems to have been near the southern coast of Samar.

22, $12^h\ 49^m$. **Northeastern Mindanao.** Earthquake of intensity III, perceptible throughout the peninsula of Surigao and the northern part of the Agusan Valley. It doubtlessly originated in the Pacific Ocean, near the northeastern coast of Mindanao, south of Siargao Island.

22, $22^h\ 1^m\ 34^s$.* **Northeastern Mindanao.** Earthquake of intensity V, which was felt within the same territory as the preceding, with which it likewise had the center in common. It was registered by the Manila and Zikawei seismographs and probably also by those of Osaka, as the disturbance recorded at the latter Observatory at $22^h\ 6^m\ 28^s$ (time of the meridian 120° east of Greenwich) appears to correspond with this earthquake. During the rest of the same night and the succeeding days followed several repetitions of intensity II–III, whose times of occurrence were the following:

22, $22^h\ 4^m$; $22^h\ 18^m$; $22^h\ 25^m$.

23, $17^h\ 23^m$.

25, $3^h\ 48^m$; $8^h\ 45^m$.

26, $21^h\ 39^m$.

From the preceding data we learn that, besides the seismic period of the Agusan Valley, there were two other well-defined periods of increased seismic activity in the two neighboring centers, viz, the one south of Samar, the other northeast of Mindanao. These three epicenters which will be discussed in a future paper, are comprised within an area about 300 kilometers in length by 150 in width.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight = 0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude. (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
113	1	I_d	V.	4 42 39	----------	4 42 53	4 43 07	0.02	2.4	4 45	Vertical component 0.01 mm.
114	1	I	V.	21 35 29	----------	----------	----------	-------	------	21 49	
			H. NNW	21 35 30	----------	----------	----------	-------	------	21 50	
115	2	II_v	V.	13 38 01	----------	13 39 54	13 41 12	.11	2.4	14 40	Earthquake, VI in the Agusan River Valley.
			H. NNW	13 38 01	----------	13 39 49	13 42 08	.72	12	14 35	
			H. WSW	13 38 01	----------	13 39 54	13 42 50	.78	11.4	14 30	
116	3	I_v	V.	9 59 13	----------	10 01 03	10 01 56	.02	2.8	10 14	Earthquake, VI in the Agusan River Valley.
			H. NNW	9 59 14	----------	10 01 01	10 02 39	.11	10.2	10 19	
			H. WSW	9 59 14	----------	10 01 03	10 02 40	.07	7.5	10 17	
117	4	I_d	V.	9 13 25	----------	9 13 43	9 14 08	.04	2.4	9 16	V. C. 0.01 mm.
118	5	I_d	V.	6 19 25	----------	6 19 38	6 19 51	.04	2	6 22	V. C. 0.02 mm.
119	6	I_r	V.	2 34 58	2 39 39	2 44 19	2 47 20	.01	6.4	3 10	
			H. NNW	2 34 59	2 39 16	2 44 21	2 47 50	.03	8.1	3 12	
			H. WSW	2 34 59	2 39 32	2 44 23	----------	-------	------	3 11	
120	6	I_d	V.	17 37 54	----------	17 38 09	17 38 49	.09	2.4	17 41	
121	7	II_r	V.	16 22 22	16 29 36	16 36 03	16 37 27	.02	16	17 25	
			H. NNW	16 22 23	16 28 38	16 35 59	16 38 54	.39	13.2	17 25	
			H. WSW	16 22 23	16 28 54	16 36 11	16 37 38	.18	12	17 15	
122	8	I_r	V.	12 04 02	12 09 35	12 13 49	12 15 53	.01	12	12 39	
			H. NNW	12 04 02	12 09 31	12 13 51	12 16 01	.07	12	12 43	
			H. WSW	12 04 02	12 09 22	12 14 10	----------	-------	------	12 37	
123	11	I_d	V.	5 58 27	----------	5 58 42	5 58 54	.03	2.4	6 01	
124	11	I_d	V.	8 01 10	----------	8 01 15	8 01 19	.07	2.4	8 04	
125	12	I	V.	15 44 18	----------	----------	----------	-------	------	16 02	
			H. NNW	15 44 20	----------	----------	----------	-------	------	16 04	
126	18	I	V.	3 25 22	----------	----------	----------	-------	------	3 35	
			H. NNW	3 25 23	----------	----------	----------	-------	------	3 36	
127	19	II_d	V.	14 09 49	----------	14 10 10	14 10 39	1.15	2.4	14 17	V. C. 0.17 mm.
			H. WSW	14 09 51	----------	14 10 12	14 10 27	.20	4.8	14 17	
128	21	I_r	V.	15 19 23	15 23 39	15 27 31	15 29 50	.01	8.8	16 05	
			H. NNW	15 19 26	15 23 27	15 27 32	15 31 55	.06	12	16 17	
129	22	I_v	V.	22 01 34	----------	22 03 51	22 05 45	.02	10	22 53	V. C. 0.01 mm. Earthquake, V near the northeastern coast of Mindanao.
			H. NNW	22 01 37	----------	22 03 43	22 06 02	1.08	11.4	22 48	
			H. WSW	22 01 37	----------	22 03 24	22 06 00	.63	11.4	22 45	
130	29	I_d	V.	11 41 23	----------	11 41 46	11 42 05	.13	2.4	11 44	V. C. 0.09 mm.
131	29	II_r	V.	18 32 29	18 37 19	18 40 40	18 41 37	.02	9.6	19 40	V. C. 0.01 mm.
			H. NNW	18 32 32	18 37 35	18 41 09	18 42 38	.47	11.4	19 42	
			H. WSW	18 32 32	18 37 15	18 40 57	18 43 00	.35	9.9	19 25	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=13.8 seconds; WSW–ENE pendulum, T=11.4 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

En el Boletín seismológico del mes de Junio indicamos que había principiado en el Valle del Río Agusan un período séismico de bastante importancia del cual se daría cuenta en este mes. Duró desde el 26 de Junio al 10 de Julio, con un ligero recrudecimiento del 17 al 21: el mayor número de temblores y los más intensos tuvieron lugar los días 2 y 3 de Julio. El epicentro se hallaba en la parte norte del valle entre Talacogon y Butúan que distan entre sí unos 50 kilómetros en dirección NNW–SSE: parece que el origen debió ser muy superficial, puesto que los más intensos terremotos, grado VI, de este período sólo fueron perceptibles en un área de poco más de 60 kilómetros de radio. Los datos en que nos fundamos pertenecen á las estaciones de Butúan y Talacogon cuyas notas enviadas al Observatorio concuerdan casi completamente en el número é intensidad de los temblores sentidos durante el período. Por otra parte consta que ningún temblor fué perceptible en Surigao á 130 kilómetros al NE del epicentro, ni en la población de Veruela situada á unos 70 kilómetros al S, dentro del mismo Valle del Agusan.

2, $13^h\ 38^m\ 01^s$.* **Valle del Río Agusan** (E de Mindanao). Temblor de tierra de intensidad VI, y de larguísima duración ($1^m\ 20^s$?); acompañado de ruido subterráneo. Repitió con menos intensidad á $14^h\ 05^m$, $14^h\ 28^m$ y $16^h\ 05^m$. Fué registrado por los seismógrafos de Manila, Zikawei, Tsingtau y al parecer por los de Osaka.

3, $9^h\ 59^m\ 13^s$.* **Valle del Agusan** (E de Mindanao). Temblor oscilatorio de intensidad VI, duración 50^s. Precedieron á este terremoto principal otros dos de intensidad IV y III á $1^h\ 47^m$ y $8^h\ 58^m$. Á $13^h\ 25^m$ y $19^h\ 35^m$ hubo dos repeticiones ó aftershocks de intensidad III y otras dos por lo menos de intensidad II. Hasta el 10 en que terminó el período seísmico principal se sintieron en el mismo distrito los dos temblores siguientes:

8, $6^h\ 10^m$. Temblor oscilatorio de intensidad III.

10, $18^h\ 40^m$. Temblor de intensidad III.

Para acabar con este distrito añadimos aquí el temblor del día 17 ocurrido en la misma región y debido al mismo centro que los precedentes:

17, $20^h\ 21^m$. **Valle del Agusan** (E de Mindanao). Ligerísimo temblor de tierra de intensidad II.

Los temblores sentidos en otras regiones del Archipiélago son los siguientes:

6, $6^h\ 29^m$. **Vigan** (NW de Luzón). Temblor oscilatorio de intensidad III, duración 3 segundos.

10, $10^h\ 10^m$. **Borongan** (E de Sámar). Temblor oscilatorio de intensidad III, duración 5 segundos.

11, $10^h\ 41^m$. **Tacloban** (NE de Leyte). Temblor oscilatorio, dirección NNE–SSW, intensidad III, duración 7 segundos.

13, $7^h\ 43^m$. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad III.

20, $4^h\ 39^m$. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad II.

22, $5^h\ 16^m$. **Sur de Samar y noreste de Leyte.** Temblor oscilatorio, intensidad IV, duración 5^s. El origen de este temblor que se sintió en toda la parte S y E de Samar y NE de Leyte en una extensión de más de 100 kilómetros de longitud, así como el de los precedentes, anunciados sólo desde la estación de Tacloban, parece se hallaba cerca de la costa S de Samar.

22, $12^h\ 49^m$. **Noreste de Mindanao.** Temblor de tierra de intensidad III perceptible en toda la península de Surigao y parte N del Valle del Agusan: tuvo sin duda su origen en el Pacífico cerca de la costa NE de Mindanao hacia el S de la Isla Siargao.

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[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

22, $22^h\ 01^m\ 34^s$.* **Noreste de Mindanao.** Temblor de tierra de intensidad V, sentido en el mismo distrito que el precedente; siendo el origen también idéntico. Registráronlo los seismógrafos de Manila y Zikawei y probablemente los de Osaka, pues la perturbación registrada allí á $22^h\ 06^m\ 28^s$ (tiempo del meridiano 120° E de Greenwich), parece corresponder á dicho terremoto. Siguieron la misma noche y los días siguientes varias repeticiones de intensidad comprendida entre II y III, cuyas fechas y horas se ponen á continuación:

22, $22^h\ 04^m$, $22^h\ 18^m$, $22^h\ 25^m$.

23, $17^h\ 23^m$.

25, $3^h\ 48^m$, $8^h\ 45^m$.

26, $21^h\ 39^m$.

De los datos precedentes se desprende que además del período séismico del Agusan hubo otros dos bien definidos en los epicentros vecinos del sur de Samar y del NE de Mindanao. Estos tres epicentros, que serán descritos más tarde, se hallan comprendidos todos dentro de un área de unos 300 kilómetros de longitud por 150 de anchura.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

BULLETIN FOR AUGUST, 1910.

METEOROLOGICAL BULLETIN FOR AUGUST, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The mean atmospheric pressure of this month is lower than that of August, 1909, for all the Philippine stations. At Manila it differs from the normal for the month by —0.22 millimeters. In most of our stations the highest pressures were observed on the 22d, while the lowest occurred on the 25th in the Visayas and Mindanao, and on the 31st in Luzon.

The mean monthly temperature is likewise generally a little lower than last year's. The absolute maximum and minimum for Manila were 34.6° and 21.7° C., and were registered on the 20th and 25th, respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR AUGUST, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from Aug., 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from Aug., 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	757.06	----------	758.30	22	755.72	25	27.8	+0.2	34.2	27	22.7	5
Surigao	57.59	—0.77	58.52	12	56.29	25	27.3	+ .2	34.5	31	22.6	23
Cebu	57.44	— .93	58.35	22	56.10	25	27	— .2	32.4	27	22.9	28
Iloilo	57.72	— .79	58.68	12, 22	56.45	25	26.9	— .3	34.2	18	22.4	7
Ormoc	57.70	— .63	58.59	22	56.40	25	26.1	— .1	33	19	19.2	27
Tacloban	58	— .51	59.09	22	56.88	25	27.6	— .2	35.1	28	23.5	2, 4, 25
Capiz	57.66	----------	58.78	22	56.32	25	27.2	0	32.9	30	21.9	13, 16
Calbayog	57.85	— .77	59.10	22	56.74	25	27.2	+ .2	34.4	19	21.7	19
Legaspi	57.25	— .89	58.57	22	56.21	31	27.4	— .7	34.7	13	22	26
Atimonan	56.88	— .90	58.48	22	55.40	31	27.9	— .1	35.9	18, 19	21.5	28
Manila	57.19	— .89	58.48	22	55.85	31	26.9	— .5	34.6	20	21.7	25
San Isidro	57	— .92	58.38	22	55.66	31	26.8	— .6	34.7	19	22	3, 25
Dagupan	56.88	— .98	58.13	22	55.33	31	27.2	— .5	35.8	16	22.7	3
Bolinao	56.60	—1.29	57.89	22	54.93	31	26.6	— .9	33.9	25	22.6	28
Baguio[2]	635.18	—1.07	636.46	22	633.67	31	17.9	— .1	24.6	5	14.6	28
Vigan	756.76	—1.15	758.26	22	755.01	31	26.8	— .7	33.4	20	22.6	29
Tuguegarao	56.32	— .90	58.06	23	53.98	31	28.1	— .3	37.4	7	22.6	1
Aparri	56.40	—1.06	58.36	23	53.87	31	27.7	0	35.4	22	22.9	28, 29

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Rainfall.—Although only very few stations report a total rainfall smaller than that for August, 1909, still, if we compare the figures with the normal amount for the month, many stations show a deficiency in precipitation, especially those of southern Luzon, the Visayas, and Mindanao. The amount collected by the rain gauges at Manila Observatory exceeds indeed that of last year's by 203.5 millimeters, but falls short of the normal by 76.8 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF AUGUST, 1910.

Station.	Total.	Departure from August, 1909.	Rainy days.	Departure from August, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from August, 1909.	Rainy days.	Departure from August, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	288.9	+ 84.1	17	0	58.9	21	Calapan	36.3	— 22.1	5	— 4	16.5	3
Isabela, Basilan	319.6	+ 36.5	23	0	48.5	13	Virac	154.4	+137.1	10	+ 5	34.5	2
Zamboanga	[1]132				68.5	28	Nueva Caceres	165.7	+ 72.8	13	0	38.2	1
Davao	255.7	— 36.4	11	+ 2	36.6	22	Batangas	168.4	+136	16	+ 6	52.8	5
Cagayan, Misamis	170.4	+ 85.5	17	— 3	68.6	21	Atimonan	48.5	— 5.3	9	— 1	8.6	23
Dapitan	36.9		9		12.2	2	Silang	382	+220.7	18	+11	51.3	24
Butuan	90.6	— 97.9	15	— 5	22.6	19	Santa Cruz, La Laguna	159.4		20		39.1	21
Dumaguete	90.6		10		30	21	Antipolo	359.2		21		42.4	23
Yap, W. Carolines	227.3		24		52.5	9	Manila	274.6	+208.5	20	+ 6	62.5	13
Tagbilaran	168.5	+ 3	14	— 1	47.3	12	Iba	765.1		25		98.3	28
Surigao	59	— 18.5	7	— 5	34.2	19	San Isidro	141.9	+ 16.7	19	+ 2	33.7	23
Maasin	300.1	— 34.4	10	— 3	50.3	12	Tarlac	256.3	+ 20.8	22	+ 4	45.4	12
Cebu	227.8	+ 80.2	19	+ 5	68.8	7	Baler	148.2	+ 91.8	6	0	134.6	24
Iloilo	144.6	+ 71.8	15	+ 2	50.3	31	Dagupan	271.8	+ 54.5	17	— 1	55.2	28
San Jose Buenavista	419.9	+151	22	— 1	76.8	3	Bolinao	528.4	+390.6	25	+ 8	88.6	28
Cuyo	333		18		89.4	21	Baguio	556.7	+189.8	26	+ 1	53.3	31
Ormoc	328	+ 95	18	— 1	66.7	14	San Fernando, Union	376.8	+285.8	16	+ 4	61.4	27
Tacloban	83.4	— 82.7	12	— 4	22.1	20	Echagüe	114.1	— 27.9	18	+ 4	25.4	23
Capiz	161.3	— .1	17	+ 2	46.8	9	Candon	450.5	+293.4	21	+ 8	110.2	27
Borongan	149.9	+ 36	15	0	37.3	14	Vigan	637.7	+311.6	23	+ 6	136.6	28
Calbayog	227.7	+101.3	14	— 1	69.8	20	Tuguegarao	166.9	+111.9	14	+ 4	28.7	10
Masbate	98.4	+ 67.5	15	+10	34.5	3	Laoag	834.1	+703.5	20	+ 6	295.1	27
Legaspi	183.9	+143.6	17	+ 3	98.6	3	Aparri	127.3	+ 12.2	13	+ 4	39.1	27
Sumay, Guam	151.5	—101.4	23	+ 2	19	25	Sto. Domingo, Batanes Is	682.8	+464.6	19	+ 7	259.6	27

[1] Twenty-eight days of observation.

DEPRESSIONS AND TYPHOONS.

If, as usually, we prescind from the so-called continental depressions—that is, from those which form over the Asiatic continent and move in an easterly direction across the Yellow Sea or the Eastern Sea, and Japan or the Pacific Ocean to the south of Japan—we may state that, up to the last week of the month, the Far East was free from atmospheric disturbances of great importance.[1] But during the last week no fewer than three made their appearance. Two of these formed simultaneously, one in the China Sea, another in the Balintang Channel, while the third originated in the Pacific Ocean southeast of the Loocho Islands. For the present we shall speak only of the first two, reserving the discussion of the third for the bulletin corresponding to the month of September. For, though the typhoon in the Pacific appeared clearly on the weather map for 2 p. m. of August 30, the storm did not burst over the China coast along the Formosa Channel until September 2, and over Indo China until the 5th of the same month.

DEPRESSION OF AUGUST 24 TO 28, 1910.

Our weather maps for 6 a. m. and 2 p. m. of August 24 showed distinctly that a depression existed or was in the process of formation in the China Sea, between parallels 15° and 16°. The barometers had fallen everywhere, but more markedly on the western coast of Luzon. This caused Manila Observatory to say the following in its daily weather notes for the 24th and 25th:

August 24, 11.40 a. m.: There are some signs of a depression forming in the China Sea between Luzon and the Paracels.

August 25, 11.50 a. m.: There are still some signs of a depression between Luzon and the Paracels.

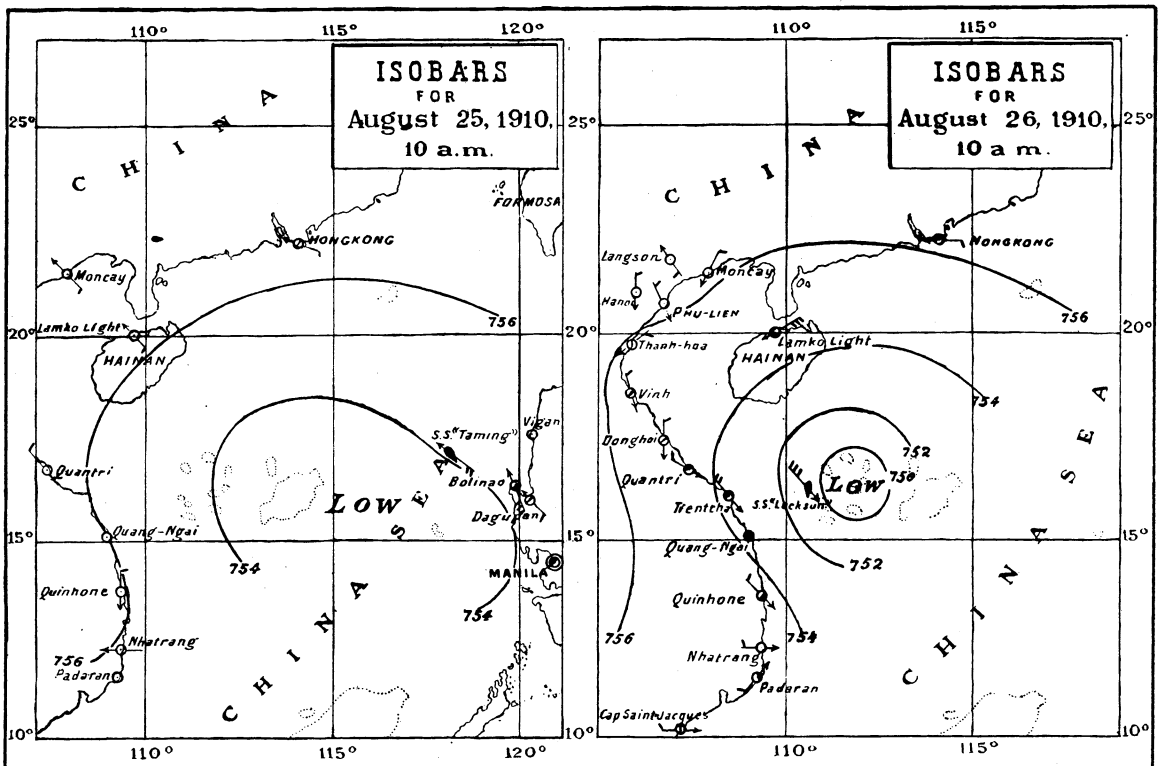
On the 27th the following was given out, fully confirming the preceding remarks:

August 27, 11.50 a. m.: The depression in the China Sea mentioned the preceding days appeared clearly yesterday afternoon in the neighborhood of the Paracels.

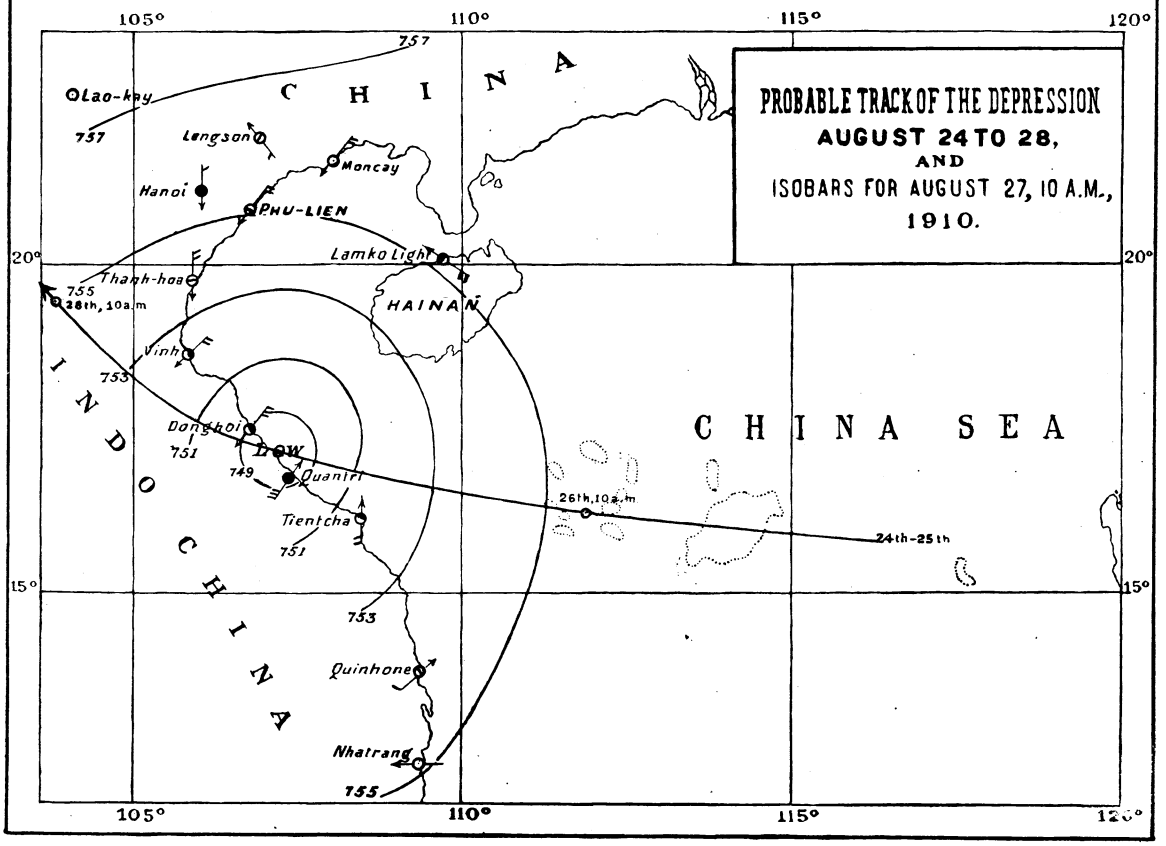
On Plate V our readers will find the track of this depression. In tracing it we have been greatly assisted by the observations made on board the steamers *Taming* and *Locksun,* which we present in the following tables:

[1] The depression which passed near southeastern Japan during the night of the 10th to the 11th was, according to us, a continental depression. The same may be said of the other depression which traversed the central part of Japan, west of Tokio, on the 14th.

Plate V.



N B.- The barometric readings have been reduced to standard gravity



N B.- The barometric readings have been reduced to standard gravity

METEOROLOGICAL OBSERVATIONS MADE ON BOARD THE STEAMER "TAMING," AUGUST 24 AND 25, 1910.

[Captain G. H. Pennefather.]

Date and hour.	Position.				Pressure.	Wind.		Remarks.
	Latitude north.		Longitude east.			Direction.	Force.	
August 24:	°	′	°	′	*mm.*		*0–12.*	
4 a. m.	21	02	115	09	757.74	SE	2	Moderate breeze and slight sea.
8 a. m.	20	30	115	33	58.25	SE	2	Do.
Noon.	20	00	115	57	58.75	Variable	2	Light wind.
4 p. m.	19	27	116	20	57.74	NEly	2	Light wind and slight sea.
8 p. m.	18	54	116	47	57.23	NNE	3	Moderate breeze and sea.
10 p. m.	18	37	116	59	57.23	NEbyN	4	Fresh breeze and moderate Ely. sea.
Midnight.	18	22	117	12	56.21	NEbyN	4–5	Fresh breeze and rough Ely. sea.[1]
August 25:								
2 a. m.	18	11	117	19	54.94	NEbyN	5	Do.
4 a. m.	17	55	117	32	54.44	NEbyN	4	Do.
6 a. m.	17	39	117	43	54.44	ESE	4	Do.
8 a. m.	17	22	117	55	55.45	ESE	4	Fresh breeze, rough ENE sea.[1]
10 a. m.	17	05	118	07	55.71	ESE	4	Do.
Noon.	16	47	118	18	55.96	ESE	3	Do.
4 p. m.	16	16	118	46	54.94	SWbyS	2	Fresh breeze, passing rain squalls.
8 p. m.	15	43	119	11	56.72	SSW	2	Moderate wind, drizzly rain.

[1] We think that this sea, from the E first, and then from ENE, may be attributed to the other typhoon forming at the time near the Balintang Channel.

METEOROLOGICAL OBSERVATIONS MADE ON BOARD THE STEAMER "LOCKSUN," AUGUST 24 TO 27, 1910.

[Captain W. Taubert.]

Date and hour.	Position.				Pressure.	Wind.		Remarks.
	Latitude north.		Longitude east.			Direction.	Force.	
August 24:	°		°	′	*mm.*		*0–12.*	
8 p. m.	11	23	109	06	755.89	Variable		
Midnight.	11	52	109	20	56.40	N	2	
August 25:								
4 a. m.	12	23	109	28	55.89	N	1	
8 a. m.	13	00	109	36	56.40	N	2	
Noon.	13	37	109	49	56.40	N	3	
4 p. m.	14	12	110	00	54.87	N	2	Fracto-stratus invading.
8 p. m.	14	47	110	09	55.89	NNE	3	Cumulo-nimbus.
Midnight.	15	22	110	19	55.64	N	3	Heavy sea. Lightning.
August 26:								
4 a. m.	15	56	110	30	53.60	NW	5	From 2^h heavy rain squalls.
8 a. m.	16	24	110	39	52.84	N	6	N swell. Hard sea.
10 a. m.	16	12	110	35	52.33	NW	6	Wind and sea increasing quick.
Noon.	15	57	110	29	51.32	W	8	Confused sea.
2 p. m.	15	41	110	21	51.06	SW	11	
4 p. m.	15	31	110	20	52.08	SW	9	Heavy S swell.
6 p. m.	15	41	110	21	50.56	WbyS	10	
8 p. m.	15	31	110	17	52.59	SWbyS	9	
10 p. m.	15	19	110	13	54.11	SWbyS	6	
Midnight.	15	13	110	12	54.37	S	6	
August 27:								
2 a. m.	15	37	110	13	54.11	S	6	
4 a. m.	16	01	110	15	53.86	SbyE	7	
8 a. m.	16	47	110	23	54.87	SbyE	6	

The observations of the *Taming* confirm our assumption regarding the location of the vortex between Luzon and the Paracels, near 16° latitude, on the 24th and 25th, and those of the *Locksun* are of great value for following the movements of the storm between the Paracels and Indo China. We have taken the latter observations from the pamphlet "The Storms of August, 1910," published by Zikawei Observatory. For the last portion of the track, lying in Indo China, we are indebted to the courtesy of M. G. Le Cadet, Director of the Observatory at Phulien.

Hongkong Observatory mentioned this depression in its daily weather notes of August 25, 26, and 27, assuming a track which agreed with that supposed by Manila Observatory. The parts of the Hongkong weather notes which refer to this disturbance were:

August 25, 12.05 p. m.: Pressure is low over the middle part of the China Sea, where a circular depression seems likely to form.

August 26, 11.55 a. m.: A depression appears to be forming over the China Sea, probably to the eastward of the Paracels.

August 27, 12.10 p. m.: The Indo China observations of this morning are not to hand. Those of last evening show a small depression lying to the westward of the Paracels. It has probably moved westward.

The Observatory of Indo China at Phulien was likewise following the course of this depression since noon of the 26th, issuing these notes:

August 26, noon: A cyclonic depression is forming opposite the coasts of Annam, over the region of the Paracels.

August 27, noon: The cyclonic depression announced yesterday as in the region of the Paracels, has approached the coasts of northern Annam, where it causes abundant rains, especially at Donghoi (125 millimeters since yesterday). At 10 a. m. to-day its center was in the vicinity and south of the said coast town.

August 28, noon: The center of the cyclonic depression which we located yesterday in the neighborhood and south of Donghoi, passed in the evening about 100 miles south of Vinh.

Zikawei Observatory sent the following typhoon warning to the stations on the China coast on August 26:

August 26, 9 p. m.: Typhoon off Tourane (Annam), moving northwest.

THE TYPHOON OF THE BATANES ISLANDS, FORMOSA, AND INDO CHINA, AUGUST 25 TO SEPTEMBER 2, 1910.

There are chiefly two reasons which make it appear advisable to discuss the typhoon of August 25 to September 2 more at length than the others. The first is furnished by the extraordinary and abnormal path followed by it; the second, by the fact that, as far as we know, nobody outside of Manila Observatory is in possession of sufficient data, I do not say for definitively indicating the place of its origin and the first part of its path, but even for suspecting them. The present instance manifests again in a striking manner the extreme usefulness which the establishment of telegraphic communication with Santo Domingo, Batanes Islands, would have for typhoon warnings.

Origin of the storm.—First of all we have to show that this typhoon did not come, already formed, from the Pacific Ocean, as is assumed by the observatories of Zikawei [1] and Tokyo,[2] but originated in the Balintang Channel, southwest of the Batanes group of islands. The observations made at our station of Santo Domingo, which we publish in the following table, are too clear on this point to admit of any doubt.

[1] "The Storms of August, 1910," page 9.

[2] Journal of the Meteorological Society, August, 1910.

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO, BATANES ISLANDS, AUGUST 25 TO 27, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Date and hour.	Pressure.	Difference in 24 hours.	Wind.	
			Direction.	Force.				Direction.	Force.
August 25:	*mm.*	*mm.*		*0–12.*	August 27:	*mm.*	*mm.*		*0–12.*
6 a. m.	757	—1.75	ENE	1	6 a. m.	753.78	—2.02	ESE	3
2 p. m.	56.17	—1.88	ENE	2	8 a. m.	53.85	—2.05	ESE	4
August 26:					10 a. m.	53	—3.20	ESE	4
6 a. m.	55.80	—1.20	E	2	Noon	51.77	—3.63	ESE to SE	5
2 p. m.	54.58	—1.59	ESE	1					

On the 27th the typhoon was already well developed, and this is the date on which the observatories of Manila and Hongkong gave their first warnings.

Manila.—August 27, 9 a. m.: Typhoon near or over Balintang Channel, direction unknown.
Hongkong.—August 27, noon: Typhoon near Balintang Channel, direction of motion unknown.

The exactness of these typhoon warnings is made evident by a look at the observations of Santo Domingo, though at the time both observatories based their announcements chiefly on the observations made at Aparri, on the north end of Luzon.

Zikawei Observatory, likewise, sent on the 27th this typhoon warning to the stations along the China coast:

August 27, 10.15 a. m.: Typhoon Balintang Channel, moving NW by W or WNW.

The typhoon in the Batanes Islands.—During August 28, 29, and 30 it was impossible to arrive at anything better than conjecture as to what had become of the typhoon of the 27th, especially as cable communication with southern Formosa was interrupted since the afternoon of the 29th.

We insert here the typhoon warnings which during these days were exchanged between Manila and Hongkong:

Manila.—August 28, 9.30 a. m.: Typhoon west of Bashi Channel, moving WNW or NW.
August 29, 9.45 a. m.: Typhoon near or over Bashi Channel, developing.
Hongkong.—August 28, 11.30 a. m.: Typhoon west of Bashi Channel moving NW.
August 28, 11.30 a. m.: Typhoon west of Bashi Channel moving NW.
August 29, 11 a. m.: Typhoon, near Bashi Channel, direction of motion unknown.

Zikawei Observatory, on its part, wired to the stations along the China coast the following warnings:

August 28, 9 a. m.: Typhoon southwest of Formosa, moving northwest.
August 29, 10 a. m.: Typhoon Bashi Channel, moving north.

Not without good reason Manila Observatory said in its ordinary weather note of the 30th:

August 30, 11.50 a. m.: Pressure continues lowest near or over the northeastern part of the China Sea and across the Bashi Channel, *the weather conditions being much complicated to-day north and northwest of Luzon.*

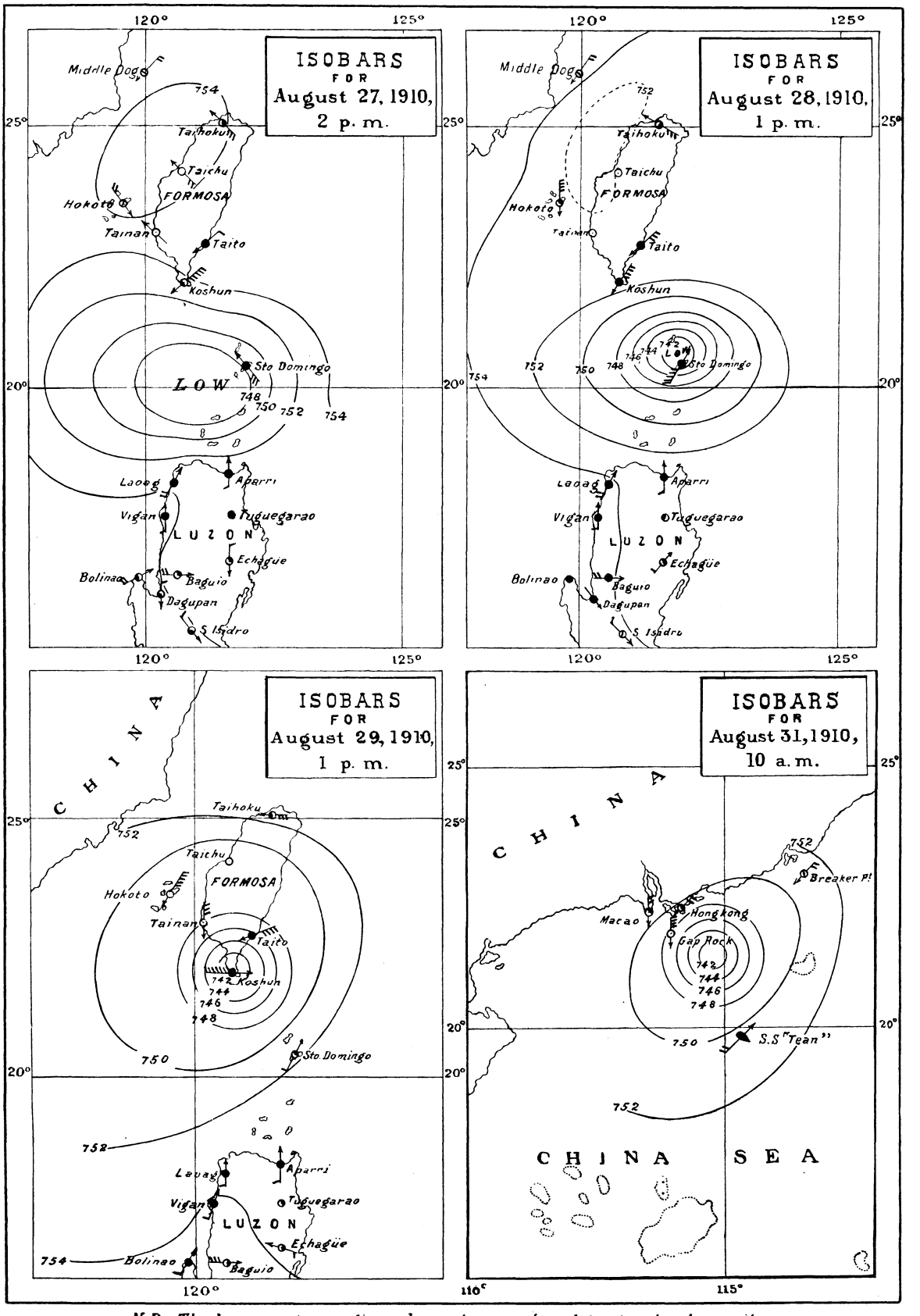
With the aid of observations received subsequently we may now follow the course which the typhoon took across the Batanes group on August 28th. The subjoined table shows the valuable observations made at the station of Santo Domingo from August 27th to 29th. The veering of the wind from ESE to SE, SSE, S, and SW is seen to have been so perfect that the passing of the vortex through the west and north of the station is immediately evident. In other words, contrary to all expectations, the typhoon, instead of taking a westerly direction, began its course by moving toward *northeast.*

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO, BATANES ISLANDS, AUGUST 27 TO 29, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rain fall (daily total).	Remarks.
			Direction.	Force.		
August 27:	*mm.*	*mm.*		0–12.	*mm.*	
2 p. m.	749.78	—4.80	ESE to SE	5		Rain squalls.
3 p. m.	49.41	—4.89	ESE to SE	5		Wind shifted to E.
4 p. m.	48.90	—5.30	E to ESE	5		Fresh breeze to moderate gale. Wind shifted to SE at 4.35.
5 p. m.	48.49	—5.81	SE to SSE	6		Strong breeze to moderate gale with heavy rain.
6 p. m.	47.69	—6.91	SE	6		Strong breeze at intervals with drizzle.
7 p. m.	48.73	—6.17	SSE	5		Rain squalls.
8 p. m.	49.29	—5.91	SSE	4		Somewhat gusty wind with drizzle.
9 p. m.	49.09	—6.31	SSE	4		Somewhat gusty wind with rain.
10 p. m.	47.73	—7.57	SSE	3		Sky clearing up a little.
11 p. m.	45.89	—8.91	ESE	5		Fresh breeze to moderate gale with showers.
Midnight.	44.47	—10.23	SE	5	259.6	Wind decreasing at 0.20. Clearing up a little to the NE quad.
August 28:						
1 a. m.	42.21	—12.29	SSE	2		Cirro-stratus can be seen overhead. Almost calm at 1.20.
2 a. m.	41.89	—12.51	SSW	4		Wind suddenly veered to SSW. Dense nimbus clouds.
3 a. m.	41.40	—12.90	SSW	6		Moderate to fresh gale at 3.35.
4 a. m.	43.20	—10.60	SSW	8		Rain squalls.
5 a. m.	43.42	—10.48	SSW	7		Moderate to strong gale at intervals.
6 a. m.	44.27	—9.51	SSW	7		Fresh gale from SSW to S with rain.
7 a. m.	44.70	—9.20	S	6		Wind backing to S, but with less force at 6.20.
8 a. m.	45.24	—8.61	S	6		Wind backing to SSE at 8.20.
9 a. m.	45.10	—9.10	SSE	5		Gusty wind with drizzle.
10 a. m.	44.84	—8.16	SSE	6		Gusty wind with slight drizzle.
11 a. m.	43.82	—8.98	SSE	6		Squally S to SSW wind, force 8, at 11.30.
Noon.	43.21	—8.56	SSW	8		Strong to whole gale with blinding rain.
1 p. m.	42.87	—8.03	SSW	9		Strong gale.
2 p. m.	43.07	—6.71	SSW	8		Fresh gale with slight drizzle.
3 p. m.	43.18	—6.23	SSW	6		Wind veering to SW, force 10, at 3.30.
4 p. m.	42.99	—5.91	SW	10		Whole gale with heavy rain.
5 p. m.	44.34	—4.15	SW	9		Whole gale with abundant rain at 5.10, lasting about 20 minutes.
6 p. m.	46	—1.69	SW	8		Wind decreasing a little but veering to WSW at 6.30.
7 p. m.	47.09	—1.64	WSW	7		Moderate gale with drizzle.
8 p. m.	47.79	—1.50	WSW	5		Gusty wind at long intervals.
9 p. m.	48.96	.13	WSW	4		Wind backing to SW at 9.20.
10 p. m.	49.55	+1.82	SW	4	209.8	Somewhat gusty wind with slight drizzle.
August 29:						
6 a. m.	52.52	+9.25	S	1		Local rain in the forenoon.
2 p. m.	52.96	+9.89	SSW	2	19.1	Passing showers at intervals at night.

The typhoon in southern Formosa.—Unfortunately we remained cut off from communication with the stations of Taito and Koshun, southern Formosa, precisely at the time when we needed their observations worst in order to enable us to follow the movements of the storm. Afterwards, when the observations of Santo Domingo had finally arrived by mail, we decided to appeal to Mr. H. Kondo, director of Taihoku Observatory, requesting to be favored with some data and observations which might aid us in tracing the track of the typhoon in the vicinity of southern Formosa. We make use of this opportunity to express our profound gratitude for the promptness and kindness wherewith Mr. Kondo acceded to our desires, thus enabling us to place before the readers in the following table the observations made at Koshun, on the southern end of Formosa, on August 29:

Plate VI.



N.B.- The barometric readings have been reduced to standard gravity

METEOROLOGICAL OBSERVATIONS MADE AT KOSHUN, FORMOSA, DURING AUGUST 29, 1910.

Hour.	Pressure.[1]	Wind.		Rainfall.	Hour.	Pressure.[1]	Wind.		Rainfall.
		Direction.	Velocity.				Direction.	Velocity.	
	mm.		*m.p.s.*	*mm.*		*mm.*		*m.p.s.*	*mm.*
2 a. m	750.1	N	8	6	2.30 p. m	745.1	SSW		
5 a. m	49.3	N	10.6	8	3 p. m	46.6	SSW	20.7	82
6 a. m	49.2	N	7.9	7	3.30 p. m	48.1	SSW		
7 a. m	48.5	N	7.7	8.2	4 p. m	48.5	S	18.5	8.5
8 a. m	47.3	NNW	11.4	14.3	4.30 p. m	49.3	SSE		
9 a. m	46.7	NNW	18	17.4	5 p. m	49.5	SE	4.8	.7
10 a. m	44.5	NNW	22.9	12.4	5.30 p. m	50.1	ESE		
11 a. m	42	NNW	27.3	35.5	6 p. m	50.5	ESE	6.7	.3
11.30 a. m	39.2	NNW			7 p. m	51.2	ESE	7.8	2.6
Noon	36.6	NW	34.6	39.3	8 p. m	51.7	ESE	8.2	
12.15 p. m	34.5	WNW	35.7		9 p. m	51.8	E	9.2	
12.30 p. m	35.3	WNW	56.8		10 p. m	52.3	E	8.3	
1 p. m	36.4	W	39.2	41.1	11 p. m	52.3	ESE	8.1	.7
1.30 p. m	40.5	SW			Midnight	52.4	E	8.1	.2
2 p. m	43.5	SW	38.5	112.2					

[1] The barometric readings of this station are reduced to standard gravity.

The barometer fell as low as 734.5 millimeters at the time of the minimum, which was observed at 0.15 p. m. The winds which had blown from northeast in the evening and during the night of the 28th, gradually backed to N, NNW, NW, W, SW, S, and SE, thus indicating the successive passage of the vortex through the east, north, and west of the station. In his letter of November 5, Mr. Kondo describes thus the violence of these winds and the effects of the storm:

> The typhoon was very severe and caused great damage: more than 400 houses destroyed, nearly 30 telegraph poles thrown down, and many plantations damaged. The storm began at Koshun at 11 a. m. and ended at 3 p. m., thus lasting only four hours. The recorded wind velocity for the hour from noon to 1 p. m. was 43.1 meters per second, which rose as high as 56.8 meters per second during the fifteen minutes from 0.15 to 0.30 p. m. So great a velocity had not been observed since the establishment of this station.

The typhoon in the China Sea.—From Koshun the typhoon moved westward with a very slight inclination to west-southwest. Hence it passed south of Hongkong in the afternoon of August 31, and north of Hainan in the morning of September 1.

The observations made on board the steamer *Loongsang,* en route from Manila to Amoy, will, we believe, interest the reader and likewise serve to confirm the track assigned to this storm from the time when the latter appeared well developed in the Balintang Channel on the 27th, until it was southeast of Hongkong in the morning of the 31st:

METEOROLOGICAL OBSERVATIONS MADE ON BOARD THE STEAMER "LOONGSANG," AUGUST 26 TO 29, 1910.

[Captain F. Wheeler.]

Date and hour.	Position.		Pressure.	Wind.		State of sea.	Remarks.
	Latitude north.	Longitude east.		Direction.	Force.		
August 26:	° ′	° ′	*mm.*		*0–12.*		
4 p. m.	Manila Bay.		755.62	WSW	4	S	
8 p. m.	14 40	120 07	56.91	Calm	0	S	WSW swell.
Midnight.	15 16	119 47	57.41	Calm	0	S	
August 27:							
4 a. m.	15 58	119 36	57.16	Variable	1	S	
8 a. m.	16 37	119 25	57.67	SW by W	3	S	Passing showers.
Noon.	17 17	119 15	57.16	SW	4	S	NE swell; passing showers.
4 p. m.	17 58	119 04	55.89	WSW	4	M	NNE swell; squally.
8 p. m.	18 17	118 42	57.16	NW by N	4	M	NE by N swell; squally and rain.
Midnight.	18 40	118 34	56.91	W	5	S	Confused Wly. and NE swells. lightning.
August 28:							
4 a. m.	19 16	118 26	55.64	W	4	M	Wly. and NEly. swells.
8 a. m.	19 50	118 18	55.89	W	5	M	Wly. and NNE swells.
Noon.	20 24	118 10	56.40	N	5	R	Confused swell. Rain, squally, thunder and lightning, 12 to 12.20 fierce rain squall from NW.
4 p. m.	20 56	118 03	55.13	NW by W	5	R	Confused swell.
8 p. m.	21 26	118 03	55.64	NW	4	M	Ely. swell.
Midnight.	21 55	118 00	55.38	NW by N	5	M	NW swell.
August 29:							
4 a. m.	22 27	117 57	54.11	NW by N	4	M	Confused swell.
8 a. m.	22 56	117 57	54.11	N by W	4	M	Do.
Noon.	23 22	118 04	53.35	N by E	5	R	Moderate NNE swell.
4 p. m.	23 45	117 38	53.35	NE by N	4	M	NE swell.
8 p. m.	Tong Sang Harbor.		53.10	NE by N	4	------	
August 30:							
4 a. m.	------	------	53.10	NE	6	------	
8 a. m.	------	------	54.11	NE by N	5	------	Coasting toward Amoy.
Noon.	------	------	54.37	NE by N	5	------	
August 31:							
8 a. m.	------	------	54.62	ENE	5	------	
Noon.	------	------	53.60	SE by E	5	------	

On the 31st Manila Observatory sent the following warning to the other meteorological centers of the Far East:

August 31, 11.15 a. m.: Typhoon over northern part of China Sea, moving west.

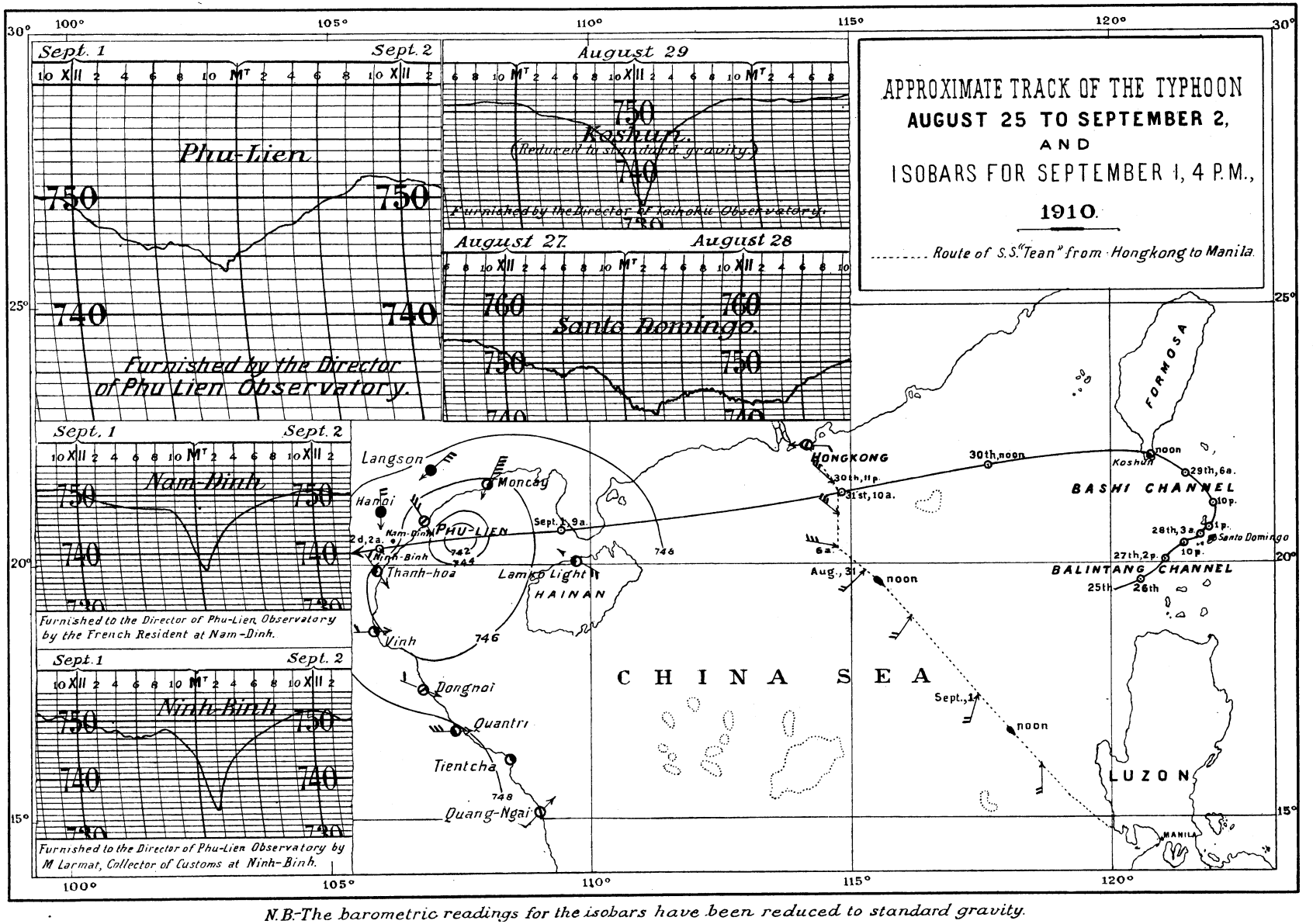
From Hongkong these cablegrams were received on August 30 and 31:

August 30, noon: Typhoon in southern part of Formosa Channel, moving west.
August 31, 10.30 a. m.: Typhoon southeast of Hongkong, moving west.

On the 31st Zikawei Observatory sent this warning to the stations on the China coast:

August 31, noon: Typhoon southeast of Hongkong beyond 200 miles, moving northwest.

In order to show more clearly that the vortex passed north of Hainan, we give also the observations made at the Lamko light-house (20° 1′ lat. N, 109° 42′ long. E).



N.B.-The barometric readings for the isobars have been reduced to standard gravity.

METEOROLOGICAL OBSERVATIONS MADE AT LAMKO LIGHT STATION, AUGUST 31 AND SEPTEMBER 1, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Date and hour.	Pressure.	Difference in 24 hours.	Wind.	
			Direction.	Force.				Direction.	Force.
August 31:	*mm.*	*mm.*		*0–12.*	September 1:	*mm.*	*mm.*		*0–12.*
3 a. m	753.78	—2.08	S	1	3 a. m	749.70	—4.08	WSW	5
6 a. m	53.33	—2.87	N	4	6 a. m	48.53	—4.80	WSW	4
9 a. m	54.04	—2.39	WNW	2	9 a. m	47.59	—6.45	SW	6
Noon	53.38	—2.34	WNW	3	Noon	48.18	—5.20	S	6
3 p. m	51.83	—2.41	WNW	2	3 p. m	48.28	—3.55	ESE	4
6 p. m	51.45	—3.10	WSW	2	6 p. m	49.16	—2.29	ESE	4
9 p. m	52.04	—2.92	WSW	3	9 p. m	50.82	—1.22	S	3
Midnight	51.14	—3.76	WSW	4	Midnight	51.65	+ .51	S	2

The typhoon in Indo China.—We are greatly indebted to M. G. Le Cadet, Director of Phulien Observatory, Indo China, for the observations, barograms, and isobars which he graciously placed at our disposal in order to enable us to trace with all possible accuracy the last portion of this typhoon's track. In Plate VII we show, together with the path of the storm, the distribution of isobars at 4 p. m. of September 1, that is, seven hours before the vortex penetrated the coast of northern Indo China, south of Phulien. In the same plate are reproduced the barographic curves obtained at Santo Domingo, Batanes Islands; at Koshun, southern Formosa; at Phulien, northern Indo China, and in two other towns of Indo China, Namdinh and Ninhbinh, which came to lie very close to the vortex, one north, the other south of the track.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La presión atmosférica media de este mes es para todas las estaciones de Filipinas inferior á la de Agosto, 1909. La de Manila difiere de la normal en —0.22 mm. Las presiones más altas se observaron en la mayoría de nuestras estaciones el 22: las más bajas tuvieron lugar el 25 en Visayas y Mindanao y el 31 en Luzón.

La temperatura media mensual resulta en general ligeramente menor que la del año próximo pasado. Las máximas y mínimas absolutas para Manila fueron 34.6°C y 21.7°C, las cuales se registraron los días 20 y 25 respectivamente.

Precipitación acuosa.—Poquísimas son las estaciones que dan un total de lluvia menor que el de Agosto 1909. Sin embargo, si se comparase con la normal de este mes, la precipitación resultaría más bien deficiente para muchas estaciones, especialmente en el Sur de Luzón, en las Visayas y Mindanao. Así, la cantidad recogida en los pluviómetros de Manila supera por una parte á la del año pasado en 203.5 mm. y por otra se separa de la normal en —76.8 mm.

DEPRESIONES Y TIFONES.

Prescindiendo como solemos nosotros prescindir de las depresiones llamadas comúnmente continentales, es decir, de aquellas depresiones que se forman en el Continente Asiático y se mueven luego hacia el Este á través del Mar Amarillo ó del Mar del Este y del Japón ó del Océano Pacífico al Sur de Japon, podemos decir que hasta la última semana del mes se vió libre el Extremo Oriente de perturbaciones atmosféricas de importancia.[1] En la última semana se formaron tres: dos de ellas simultáneas en el Mar de China y en el canal de Balintang respectivamente, y otra en el Pacífico al SE de las Islas Liukiu. Hablaremos aquí solamente de las dos primeras. La última la dejamos para el Boletín del próximo mes de Septiembre, pues aun cuando apareció claramente en el mapa del tiempo de la tarde del 30 de Agosto, con todo, no vino á desfogar sobre la costa de China á lo largo del canal de Formosa hasta el día 2 de Septiembre y sobre el Norte de Indochina hasta el día 5 del mismo mes.

DEPRESIÓN DE 24 Á 28 DE AGOSTO, 1910.

El día 24 los mapas del tiempo de Filipinas de 6 a. m. y 2 p. m. indicaban claramente la existencia ó formación de una depresión en el Mar de China al W de Luzón entre los paralelos 15° y 16°. Los barómetros habían bajado en todas las estaciones, pero mucho más marcadamente en las de la costa occidental de Luzón. De ahí que dijese el Observatorio de Manila en las notas ordinarias del tiempo de los días 24 y 25:

Día 24, 11.40 a. m.: Hay indicios de una depresión que se está formando en el Mar de China entre Luzón y las Islas Paracels.

Día 25, 11.50 a. m.: Hay aún indicios de una depresión en el Mar de China entre Luzón y Paracels.

El día 27 se decía lo siguiente confirmando de lleno lo dicho en estas notas:

Día 27, 11.50 a. m.: La depresión del Mar de China indicada los días anteriores apareció claramente ayer tarde en los alrededores de las Islas Paracels.

En la lámina V verán nuestros lectores la trayectoria de esta depresión. Nos han ayudado bastante para trazarla las observaciones hechas á bordo de los vapores *Taming* y *Locksun* las cuales damos en dos tablas en el texto inglés. Las del vapor *Taming* confirman la situación del vórtice supuesta por nosotros para los días 24 y 25 entre Luzón y Paracels y en los alrededores de 16° latitud N. Las del vapor *Locksun* son preciosas para seguir al baguio en la parte de su trayectoria entre las islas Paracels é Indochina. Estas observaciones del *Locksun* las hemos tomado de un folleto publicado por el Observatorio de Zikawei "The Storms of August, 1910."

[1] La depresión que pasó cerca del SE de Japón durante la noche del 10 al 11, así como también la que el día 14 atravesó el centro de Japón por el W de Tokio fueron, á nuestro juicio, depresiones continentales.

La última parte de la trayectoria en Indochina la debemos agradecer á M. G. Le Cadet, Director del Observatorio de Phulien.

El Observatorio de Hongkong indicó esta depresión en las notas ordinarias de los días 25, 26 y 27, suponiendo una trayectoria en todo conforme con la supuesta por el Observatorio de Manila. Véanse á continuación las partes de las notas á que nos referimos:

Día 25, 12.05 p. m.: La presión está baja en la parte central del Mar de China donde es probable se forme una depresión ciclónica.

Día 26, 11.55 a. m.: Una depresión parece estar formándose en el Mar de China probablemente al Este de Paracels.

Día 27, 12.10 p. m.: Las observaciones de Indochina de esta mañana no han llegado aún. Las de ayer tarde señalan una pequeña depresión al Oeste de las Paracels. Probablemente se ha movido hacia el Oeste.

También el Observatorio de Phulien, Indochina, fué siguiendo el curso de esta depresión desde mediodía del 26 en la forma siguiente:

Día 26, mediodía: Una depresión ciclónica se está formando sobre la región de Paracels.

Día 27, mediodía: La depresión situada ayer en Paracels se ha acercado á la costa del Norte de Annam. Su centro se hallaba á las 10 de esta mañana en las proximidades del Sur de Dong-Hoi.

Día 28, mediodía: El centro de la depresión que señalamos ayer en las proximidades del Sur de Dong-Hoi pasó por la tarde á unas 100 millas al Sur de Vihn.

El Observatorio de Zikawei envió á las estaciones de la costa de China este aviso de tifón el día 26:

Día 26, 9 p. m.: Tifón en frente de Tourane (Annam) moviéndose al NW.

EL BAGUIO DE LAS ISLAS BATANES, FORMOSA É INDOCHINA, 25 DE AGOSTO Á 2 DE SEPTIEMBRE, 1910.

Dos motivos nos mueven principalmente á extendernos más en la discusión de este baguio que en la de otros. Primero, lo extraordinario y anormal de su trayectoria, según verán nuestros lectores. Segundo, porque nadie, que sepamos, fuera del Observatorio de Manila, se halla en posesión de datos suficientes, no digo ya para precisar el punto de origen de este baguio y la primera parte de su trayectoria, pero ni aún para sospecharlos. El presente caso pondrá una vez más de manifiesto la utilidad suma que reportaría para el anuncio de tifones el establecimiento de una estación telegráfica en Santo Domingo, Islas Batanes.

Origen de este baguio.—Ante todo hemos de hacer constar que este baguio no vino formado del Pacífico como suponen los Observatorios de Zikawei ("The Storms of August, 1910, pág. 9) y Tokio (Journal of the Meteorological Society, August, 1910), sino que se formó en el Canal de Balintang al SW de las Islas Batanes. Las observaciones hechas en nuestra estación de Santo Domingo son tan convincentes en este punto que no dejan lugar á ninguna duda. Véanse en una tabla en el texto inglés.

El 27 estaba ya el tifón bien desarrollado: y este fué el día en que los Observatorios de Manila y Hongkong enviaron sus primeros avisos de tifón:

Manila.—Día 27, 9. m.: Tifón en el, ó cerca del, canal de Balintang; dirección desconocida.

Hongkong.—Día 27, mediodía: Tifón cerca del canal de Balintang, dirección desconocida.

La exactitud de estos anuncios de tifón es á todas luces evidente, teniendo á la vista las observaciones de Santo Domingo. Ambos Observatorios se fundaban entonces principalmente en las observaciones hechas en Aparri, norte de Luzón.

El Observatorio de Zikawei envió también este aviso de tifón á las estaciones de la costa de China la mañana del 27:

Día 27, 10.15 a. m.: Tifón en el canal de Balintang, moviéndose al NW ¼ W ó WNW.

El tifón en las Islas Batanes.—Durante los días 28, 29 y 30 sólo era posible hacer algunas conjeturas sobre lo que habría sucedido con el tifón del 27, mayormente habiéndose cortado la comunicación telegráfica con el sur de Formosa desde la tarde del día 29.

Damos á continuación los avisos de tifón que se cruzaron aquellos días entre los Observatorios de Manila y Hongkong:

Manila.—Día 28, 9.30 a. m.: Tifón al W del canal de Bashi, moviéndose al WNW ó NW.
Día 29, 9.45 a. m.: Tifón en el, ó cerca del, canal de Bashi, desarrollándose.
Hongkong.—Día 28, 11.30 a. m.: Tifón al W del canal de Bashi, moviéndose al NW.
Día 29, 11.00 a. m.: Tifón cerca del canal de Bashi, dirección desconocida.

El Observatorio de Zikawei, por su parte, telegrafió á las estaciones de la costa de China los siguientes avisos de tifón:

Día 28, 9 a. m.: Tifón al SW de Formosa, moviéndose al NW.
Día 29, 10 a. m.: Tifón en el canal de Bashi, moviéndose al N.

No sin razón decía el observatorio en la nota ordinaria del tiempo dada á 11.50 a. m. del día 30:

La presión atmosférica continúa muy baja en la, ó cerca de la, parte nordeste del Mar de China, y á través del canal de Bashi, siendo hoy *muy complicadas las condiciones del tiempo al Norte y Noroeste de Luzón.*

Pero veamos ya á la luz de observaciones recibidas posteriormente el curso que siguió este tifón el día 28 á través de las Islas Batanes. En el texto inglés damos en otra tabla las preciosas observaciones hechas del 27 al 29 en la estación de Santo Domingo. El role de los vientos del ESE al SE, SSE, S y SW fué tan perfecto, que salta á la vista el paso del vórtice por el W y N de la estación. En otras palabras, el baguio, contra todo lo que era de esperar, en vez de dirigirse al W se movió en un principio hácia el NE.

El tifón en el Sur de Formosa.—Por desgracia quedamos incomunicados con las estaciones de Taito y Koshun, en el Sur de Formosa, cuando más necesidad teníamos de ellas para poder seguir con sus observaciones la trayectoria de este baguio. Por esto, una vez hubimos recibido las observaciones de Santo Domingo, nos resolvimos á escribir á Mr. H. Kondo, director del Observatorio de Taihoku, pidiéndole se sirviese facilitarnos algunos datos y observaciones que nos pudiesen ayudar para seguir el curso del tifón por las proximidades del Sur de Formosa. La prontitud y atención con que Mr. Kondo accedió á nuestros deseos le han hecho acreedor á nuestro más profundo agradecimiento.

En el texto inglés podrán ver nuestros lectores las observaciones hechas durante el día 29 en la estación de Koshun, extremidad sur de Formosa. El barómetro bajó hasta 734.5 mm., mínima observada á 0.15 p. m. Los vientos que soplaban del NE la tarde y noche del 28 fueron rolando gradualmente al N, NNW, NW, W, SW, S, y SE, indicando así el paso sucesivo del vórtice por el Este, Norte y Oeste de la estación.

La violencia de estos vientos y los efectos del temporal los describe Mr. Kondo en estos términos en su carta de 5 de Noviembre último:

El tifón fué muy terrible y causó grandes perjuicios. Destruyó más de 400 casas, echó al suelo cerca de 30 postes telegráficos y perjudicó muchas plantaciones. El temporal empezó en Koshum á eso de las 11 a. m. y terminó á 3 p. m., durando por lo tanto unas 4 horas. La velocidad media del viento fué de 43.1 metros por segundo durante una hora, es decir, desde la 12 mediodía hasta 1 p. m. y de 56.8 metros por segundo por espacio de 15 minutos, esto es, desde 0.15 hasta 0.30 p. m. Una velocidad tan grande jamás se había observado en Koshun desde el establecimiento de dicha estación."

El tifón en el Mar de China.—Desde Koshun se dirigió el tifón al W con una ligerísima inclinación al WSW. De suerte que el vórtice pasó por el Sur de Hongkong la tarde del 31 de Agosto, y por el Norte de Hainán la mañana del 1 de Septiembre.

Las observaciones hechas á bordo del vapor *Loongsang,* en viaje de Manila á Amoy, creemos serán de interés á nuestros lectores y servirán para confirmar la parte de la trayectoria de este baguio desde que apareció bien desarrollado en el canal de Balintang el día 27 hasta que se halló al SE de Hongkong la mañana del 31.

El Observatorio de Manila envió este aviso de tifón la mañana del 31 á los demás Centros Meteorológicos del Extremo Oriente:

Día 31, 11.15 a. m.: Tifón en la parte del norte del Mar de China, moviéndose al W.

Del Observatorio de Hongkong nos fueron remitidos los siguientes telegramas los días 30 y 31 de Agosto:

Día 30, mediodía: Tifón en la parte sur del canal de Formosa moviéndose al W.
Día 31, 10.30 a. m.: Tifón al SE de Hongkong moviéndose al W.

El día 31 el Observatorio de Zikawei envió á las estaciones de la costa de China el siguiente aviso de tifón:

Día 31, 12 m. d.: Tifón al SE de Hongkong á más de 200 millas, moviéndose al NW.

Para que mejor se vea el paso del vórtice por el norte de Hainán publicamos en el texto inglés las observaciones hechas en la estación de Faro Lamko (20° 1′ Lat. N., 109° 42′ Long. E.).

El tifón en Indochina.—Mucho debemos agradecer á M. G. Le Cadet, director del Observatorio de Phulien, Indochina, las observaciones, barogramas é isobaras que se ha dignado poner á nuestra disposición para que pudiésemos dar con toda exactitud la última parte de la trayectoria de este baguio. En la lámina VII damos juntamente con la trayectoria de este tifón la distribución de isobaras á 4 p. m. del 1 de Septiembre, es decir, siete horas antes de que el vórtice penetrase en la costa norte de Indochina al sur de Phulien. En la misma lámina verán nuestos lectores las curvas barográficas obtenidas en Santo Domingo, Islas Batanes, Koshun, Sur de Formosa, Phulien, norte de Indochina, y en otros dos pueblos de Indochina, Nam-Dinh y Ninh-Binh, que se hallaron muy cerca del vórtice, uno al norte y otro al sur de la trayectoria.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Maximum.	Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Shelter, total.
	mm.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	°C.	*Per ct.*	*mm.*	*mm.*	*mm.*
1	757.81	26.1	30.7	23.8	29.3	30	29.7	29.8	28.9	28.7	84.8	21.2	1.6	1.9
2	56.85	26.7	31.7	23.3	29.3	30.4	29.7	29.8	28.9	28.7	83.9	21.7	3.5	2.6
3	56.80	26.4	31.7	23.8	29.2	30.1	29.7	29.7	28.8	28.5	85.8	21.8	2.4	2
4	57.33	27.3	31.9	24	29.6	30.6	29.7	29.8	28.9	28.6	82.3	21.9	3.3	2.7
5	57.61	27.2	32.3	23.8	29.8	30.8	29.8	29.9	29	28.7	86.6	23	2.5	2
6	57.65	27.7	31.7	24.4	29.8	30.8	29.8	30.1	29	28.7	83.8	22.9	3.9	2.9
7	57.35	27.3	32.1	24	30	30.8	29.9	29.9	28.9	28.8	83.5	22.4	3	2.2
8	57.08	27.4	31.7	23.8	29.9	30.8	30	30.1	28.9	28.7	80.5	21.8	3.5	2.6
9	57.11	26.1	30.4	23.4	29.3	29.4	29.9	29.8	29	28.7	89.2	22.4	1	1.4
10	57.02	26.9	31.4	23.2	28.8	29.6	29.5	29.6	29	28.7	83.4	21.8	3.3	2.4
11	57.09	27.5	32.5	24.2	29.1	30.2	29.6	29.8	29	28.7	82.1	22.3	3.2	2.7
12	58.01	26.2	31.7	23.7	29.3	29.8	29.6	29.5	29	28.7	88.2	22.2	1.1	1.5
13	56.71	26.6	31	23.8	28.9	29	29.3	29.3	29	28.7	87.2	22.3	1.9	2
14	56.57	27.3	31.1	24.6	28.8	29.3	29.2	29.4	29	28.7	85.2	22.9	2.3	2
15	57.21	26.8	31.6	24.1	29.1	30	29.4	29.4	29.1	28.7	84.7	22.1	3	2.4
16	57.13	27.3	32.2	24	29.2	30.1	29.4	29.5	29	28.7	84.4	22.5	3.2	2.7
17	56.96	27.6	32.8	24.8	29.6	30.5	29.6	29.7	29	28.8	82.6	22.5	2.7	2.4
18	57.50	28.1	33.6	24.1	29.7	30.6	29.7	30	29	28.8	80.5	22.5	3.6	2.5
19	57.62	28	33.8	24.8	29.9	30.9	29.8	30.1	29	28.8	80.4	22.4	3	2.4
20	57.48	27.7	34.6	23.7	29.7	30.9	29.9	29.9	29	28.8	83.9	22.8	2.8	2.2
21	57.97	25.3	30.2	23.3	29.5	29.4	29.8	29.7	28.9	28.8	93.5	22.3	.1	.6
22	58.48	26.6	32.2	22.4	28.5	29.4	29.5	29.6	29	28.7	85.3	21.9	2.2	1.7
23	57.75	26.4	32.2	22.5	28.8	29.6	29.5	29.5	29	28.8	87	22.2	1.4	1.5
24	56.47	24.2	27.6	22.6	28.3	28.3	29.3	29.5	28.9	28.7	93.7	21	0	.6
25	56.23	26.2	32.7	21.7	27.5	28.8	28.9	29	29	28.7	85.7	21.5	2.7	1.9
26	56.42	27.3	33	23	28.5	29.5	29	29.2	29	28.8	81.8	21.8	3.9	2.6
27	57.06	27.7	32.2	24	29.1	30.2	29.3	29.6	29	28.8	80.8	22.2	3.3	2.5
28	57.56	27.7	32.3	23.3	29.1	30.1	29.6	29.5	29	28.9	78.2	21.5	3.9	3.4
29	57.25	27.2	31.3	23.6	29.2	30.1	29.6	29.6	28.9	28.7	81.5	21.8	2.6	2.3
30	56.87	25.6	30.5	23.4	28.9	29.1	29.5	29.3	29	28.7	88.1	21.4	.2	1.4
31	55.85	27.1	31.3	23.7	28	28.7	29.1	29.1	28.9	28.6	83.8	22.3	2.6	2
Mean	757.19	26.9	31.8	23.6	29.2	29.9	29.6	29.6	29	28.7	84.6	22.1	2.5	2.1
Total													77.7	66
Departure from normal	—0.22	—0.2	+1.1	—0.1							—0.3	—0.4		

Date.	Wind. Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Prevailing form and its direction. Upper.	Lower.	Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0–10.*			*h.* *m.*	*mm.*	
1	NW	174.5	16	N	9.8	Ci.-S.	S.-Cu. WbyS	1 20	2.6	≡° ● a. ○ a. p.
2	SW quad.	353	37.5	WSW	9.2	A.-Cu. W quad.	Cu.-N. SW quad.	4 15	-------	≡° a. ⸝° d° p.
3	WSW	221.5	29.5	WSW	8	Ci.-S. W	Cu.-N.	6 25	11.7	● a. ⊤° ⸝° ◠² d° p.
4	WSW	253	27	WSW	4.4	Ci. E	Cu. S	10 30	2.1	≡° a. ⌈ ● p.
5	SW quad.	168	18.5	SSW	6.8	Ci.-S.	Cu.-N. WSW	7 25	-------	≡° d° a. ⌈ a. p.
6	WSW	331.5	27.5	WSW	7.9	Ci.	Cu. NE	8 00	9.2	≡° ◠² a. ⌈° ⸜² p.
7	WSW	289.5	36	WSW	6.9	Ci.-S.	Cu. W quad.	7 15	.3	∞° ◠ a. ⌈ ● p.
8	WSW	386.5	36	WSW	8.1	Ci.-S.	Cu. W	5 25	-------	≡° a. ⸜ p.
9	SW quad.	336.5	36	W	9.6	Ci.-S.	Cu.-N. WSW	0 55	53.4	●² a. ⸝° p. ● a. p.
10	SW	329.5	37	WbyS	8.4	A.-Cu.	Cu.-N. WSW	6 10	2.4	≡° ● ○ a. d° p.
11	WSW	341	39	WSW	7.3	Ci. ENE	Cu. SW	9 35	3	≡° a. ● p.
12	W quad.	258	29	W	8.8	A.-Cu. WNW	Cu.-N. WNW	4 50	22.2	≡° d a. ⌈° ● p.
13	WSW	297.5	29	WSW	7	A.-Cu. WNW	Cu., Cu.-N. WSW	6 10	62.5	⌈° ◠° ⊤° ●² a.
14	SW	364.5	35.5	WSW	7.7	A.-Cu.	Cu. WSW	7 15	4.8	● ○ a. ⸜ p.
15	SW quad.	251	31	SWbyW	7.7	A.-Cu.	Cu. SW	7 05	-------	Ω ≡° a.
16	WSW	229.5	27	SWbyW	5.5	Ci.	Cu. E	9 05	4.3	● ≡° a. ⸜ p.
17	W quad.	147	14	W	5.8	Ci.-S.	Cu. E	9 45	1.5	● ≡° a. ⌈ ●° p.
18	W quad.	165.5	14.5	SW	2.9	Ci.-S.	Cu. SE	10 05	-------	≡° a.
19	NNE	164.5	22.5	NE	5.2	Ci.-S., A.-Cu. E	Cu. NE	8 20	-------	≡° a. ⌈° d° p.
20	W quad.	148	16	W	7	Ci.	Cu. E	8 20	1.3	≡° a. ⌈ ● ⸜ ☋° p.
21	NE	56.5	5.5	NE	9.5	A.-Cu. E	Cu.-N. NEbyE	0 00	11.5	d ● a. p.
22	ENE	101.5	12	W	9.1	Ci.-S.	Cu.-N. EbyS	4 30	-------	≡° d a. ⊤ p° ⸜ p.
23	ENE	142.5	18.5	NW	8.6	Ci.-S.	Cu. E	4 50	18.5	≡° a. ⌈² ● p.
24	Variable	195	33	WSW	10	----------	Cu.-N. W	0 00	18	● a. p.
25	W quad.	126.5	13	WbyN	7.2	Ci.-S.	Cu. SE quad.	6 50	-------	≡° ○ a. ⌈ ⸜ p.
26	SW quad.	165	16	S	4.1	Ci.-S.	Cu. W	8 55	-------	≡° a.
27	W quad.	223.5	25	WSW	7.4	Ci.-S. NNE	Cu.	6 30	-------	≡° ○ a.
28	WSW	284	27	WSW	8.1	Ci.-S. NE	Cu. W	9 55	-------	Ω° ≡° a. ○° a. p.
29	NW quad.	347	30	WSW	9.6	Ci.-S.	Cu. W quad	3 20	4.3	d° a. ● p.
30	W quad.	356	31	W	10	Ci.-S.	Cu.-N. SW quad.	0 10	29.5	⸝° p. ● a. p.
31	WSW	376	38	WSW	9.7	A.-Cu.	Cu.-N. WSW	2 20	11.5	≡ a. ● a. p.
Mean		244.6	26		7.7			5 59		
Total								185 30	274.6	
Departure from normal		—39.6			— 0.1			+39 32	—76.8	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3] Mean.	Maximum.	Minimum.	Relative humidity (mean).[3]	Wind.[3] Prevailing direction.	Force (mean).	Clouds.[3] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.57	28.8	33.7	24.9	74.2	S quad.	1.8	7.8	Ci.-S.	Cu. SSW,NNW	------	
2	56.64	28	32.2	25.2	76.5	SE	1.8	9.4	A.-S. E	Cu.-N. SW,W	7.1	☾ ☈ ☈ ● p.
3	56.85	27.7	31.5	23.9	77.8	SE	1.6	9.4	Ci.-S.	Cu.-N. SW	26.7	☈ ☈ ● p.
4	57.08	27.1	31.3	23.2	79.7	SE	2	8.4	A.-S.	Cu. SW	12.7	☾ ☈ ☈ ●° p.
5	57.63	26.9	31.9	22.7	85.2	S quad.	1.2	7.8	Ci.-S.	Cu.-N. E, NNE	.5	●° a. d p.
6	57.52	27.6	31.9	23.7	78.5	N quad.	1.4	7.4	Ci -S.	Cu.-N. WNW	------	☾ p.
7	57.43	28.2	33.8	23.9	78.3	S quad.	2.2	8.6	Ci.-S. NE	Cu.-N. SW	3.3	☾ ● p.
8	57.40	28.3	33.8	25.6	75	SE	2.6	8	Ci.-S. NNE	Cu. SW	------	
9	57.40	27.9	32.2	24.4	74.6	SE	2.6	7.2	Ci.-S. SE, ENE	Cu.-N. SW	------	
10	57.46	28.4	32.2	25.7	70.8	S quad.	2.2	7.2	Ci.-S.	Cu.-N. SW	------	
11	57.44	28.7	32.3	25.6	73.6	SE	2	7.2	Ci.-S.	Cu.-N. SW	1.3	☾ p.
12	57.99	27.5	30.8	25	80.8	SE	1.2	9.2	A.-S. SE	Cu.-N. SW	47.3	d° ● a.●² p.
13	57.06	27.6	32.2	24.3	76	S quad.	2.2	8.2	Ci.-S.	Cu.-N. Variable	------	☾ d° p.
14	57.26	27.5	31.1	25.6	77.3	SE	1.6	10	Ci.-S	Cu.-N. SW	34	d° ☾ ☿ ●² p.
15	57.59	27.4	32.1	23.1	79.1	SE	1.2	8.4	Ci.-S.	Cu. SW	4.3	●² ┼ a.
16	56.99	27.4	33.8	25	79.8	SE	1.8	8	Ci.-S.	Cu.-N. SW,NNE	.8	d a. ∪ ☾ p.
17	56.38	28.1	32.7	24.4	79.4	SE	1.6	7.2	Ci.-S.	Cu.-N. SE, NNE	4.8	
18	56.70	28.5	33.6	24.8	77.6	SE	1.6	6.6	Ci.-S.	Cu.-N. NNE	------	d a. ☾ p.
19	56.69	27.4	31.8	22.8	80.6	N quad.	1.4	8.6	Ci.-S.	Cu.-N. NE, E	------	d p.
20	56.95[3]	27.2	30.5	23.8	81	N quad.	1.8	9.6	Ci.-S.	Cu.-N. NE	16.8	● a p. ┬ d p.
21	57.69	27.4	33.4	23.7	82	Variable	1.8	9.4	Ci.-S.	Cu. S, SW	2.3	● a. ☾ d p.
22	58.30	26	30	25	87.4	NE	1.8	9.8	Ci.-S.	Cu.-N. E	4.6	d a● a. p. ┬ p.
23	57.09	27	30.9	23.6	84.2	SE	1.2	8.8	Ci.-S.	Cu.-N. E, NE	------	┬° p.
24	56.25	27.9	32.5	24.1	79.6	SE	1.4	7	Ci.-S.	Cu.-N Variable	------	☾ p.
25	55.72	27.7	32.8	24.1	80.2	SE	1.4	6.6	Ci.-S.	Cu.-N. Variable	------	☾ p.
26	55.73	27.7	33.2	24.1	78.4	SE	1.4	6.6	Ci.-S.	Cu.-N. SE, NE	------	┼ ☾ p.
27	56.33	28.4	34.2	23.5	77.2	SE	1.6	7.4	Ci.-S.	Cu.-N. E	2	☾² ┼ p.
28	57.29	27.9	33	23.9	80.2	SE	1.8	7.6	Ci.-S.	Cu.-N. SW	------	● a. ☾ ┬ a. p.
29	57.32	28.1	32.6	25	78	SE	2	8.4	Ci.-S.	Cu -N. SSE	------	☾ ┬ p.
30	57.04	28.3	32.4	25.7	76	N quad.	1.6	9	Ci.-S.	Cu.-N. SW	------	
31	56.16	28.7	31.8	26.5	72.1	S quad.	2	8	Ci.-S. NE	Cu. SW	------	
Mean	757.06	27.8	32.3	24.4	78.4		1.7	8.2			------	
Total	------	------	------	------	------		------	------			168.5	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.02	27.6	33.1	22.7	78.8	S quad.	0.7	3.8	Ci.-S. SE	Cu., Cu.-N. W	------	Ω² ≡° a. ∞ ☾ p.
2	57.08	27.6	32.8	23.5	80.2	SW quad.	.7	3.5	Ci.-S. E	Cu.-N. W	1.8	≡° ☾a. ∞ ┬ ☾p.
3	57.40	27.1	31.6	23.3	83	Wby S,WSW	.3	6.8	A.-Cu. SE	Cu.-N. SW	------	≡° d² a. ∞ p.
4	57.54	27.3	31.7	23.6	81.7	SW quad.	.8	3.5	Ci.-Cu.	Cu. W	------	Ω² ≡° ☾a. ∞ ☾p.
5	57.83	27.1	32.5	23.8	82.7	SW quad.	.7	3.3	Variable.	Cu.-N. SW	------	∞ p.
6	58.02	27.4	32.7	23.5	81.5	SW quad.	1.2	4.3	Ci. E	Cu., Cu.-N W	------	∞ ☾ p.
7	57.71	27.5	32.6	23.2	78.7	SW quad.	1	5	Ci., Ci.-S. E	Cu. W	------	≡° a. ∞ ☾ p.
8	57.80	26.9	30.8	23.7	83	WSW	.7	7.8	Ci.-S.	Cu. SW	------	☾² p.
9	57.92	27.3	33.4	23.2	78.7	SSW,W	.3	5.2	Ci., Ci.-S. E	Cu. WSW	1	☾ ≡° a. ∞ p.
10	58	27.4	33.1	23.7	79.7	SW quad.	.7	4.7	A.-Cu. E	Cu., Cu.-N. W	------	d Ω² a. ∞ ☾ p.
11	57.97	27.7	33	23	80.4	S quad.	.8	6.8	Ci.-S. E	Cu., Cu.-N. S,SW	------	Ω ≡° a ∞ ☾ p.
12	58.52	27.2	32	24.1	81.3	S, SW	.3	7.3	Ci.-S. E	Cu. W	------	☾ a. ∞ p° p.
13	57.32	28.3	33.5	24.1	78.3	S quad.	1	7	A.-Cu. E	Cu. W	2	≡° a. ∞ p.
14	57.39	26.2	29.6	24.1	88.2	SW quad.	.8	10	Ci.-S.	Cu.-N.	7.3	●° a. ∞ p d a. p.
15	57.78	27	31.4	24.2	80.9	SW,W	.8	6.8	Ci.-S.	Cu. SW	4.1	●° ≡° a. ∞ p.
16	57.65	26.5	32.1	22.7	84.8	W, S	.5	6.7	A.-Cu. N	Cu. SW	------	● a. ∞ p.
17	57.29	27.5	32.2	23.1	81.2	S	1	3.7	Ci.	Cu.	------	☾ ≡° a. ∞ p.
18	57.54	27.8	33.1	23.1	80.2	E quad.	.8	4.2	Ci., Ci.-S.	Cu -N.	------	≡° a. ∞ ∪ p.
19	57.72	26.6	32.6	23.9	86.5	NE	.7	7.2	Ci., Ci.-S. NE	Cu., Cu.-N. E	34.2	≡° a. ●² p.
20	57.53	26.6	30	23	85.2	NE quad.	1.2	8.2	Ci.-S. NE	Cu.-N. E	7.1	● a. ∞ p.
21	58.10	27	31.1	23.3	83.5	E	.2	8.3	Ci.-S.,A.-Cu.NE,SE	Cu.-N. E	------	≡° a.
22	58.47	25.8	30.5	22.7	88.7	ENE	.2	7.3	Ci.-S. NE	Cu.-N. E	------	Ω² ≡° a.
23	57.50	26.4	30.6	22.6	87	Variable	.5	7.8	Ci.-S. NE	Cu., Cu.-N.	------	∪ ≡° a. ∞ Ω p.
24	56.79	26.8	31.3	23.2	85.2	WNW	.3	4.7	A.-Cu. SE	Cu., Cu.-N. SW	------	Ω² a. ∞ ☾ p.
25	56.29	27.6	32.2	23.1	80.3	Variable	.5	2.3	Ci. NE	Cu.	------	∈ Ω² a. ∞ ☾ p.
26	56.50	27.8	32.5	23.4	80.8	ENE	.5	2.8	Ci. NE	Cu.-N.	------	Ω² a. ∞ p.
27	57.26	27.9	32.7	23.9	79.7	ENE,WNW	.3	2.8	Ci.-S. E	Cu., Cu.-N.	------	Ω² ≡° a. ∞ ☾p.
28	57.70	27.6	31.4	23.7	80.8	S,WbyN	.8	3.5	A.-Cu.	Cu.-N.	------	☾ p.
29	57.89	27.8	33.1	23.4	79.1	S, W	.8	4.2	Ci. NE	Cu.-N. S	------	Ω² a. ∞ ☾ p.
30	57.67	28.6	33.5	24.5	75.8	S, SSW	.8	5.5	Ci.-S. NE	Cu.-N. SW	1.5	∞ ☾ p.
31	57.05	27.7	34.5	24	81.3	SW quad.	.5	7.3	Ci.-S.,A.-Cu.NE,SE	Cu.-N. SW	------	● a. ☾ p.
Mean	757.59	27.3	32.2	23.5	81.8		.7	5.6			------	
Total	------	------	------	------	------		------	------			59	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied,—1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.78	26.8	32	23.6	67.7	SW quad.	6.9	5.3	Ci., Ci.-S.	Cu. SW	19.3	≡° ☊ ○ a. ● ⌐◹ p.
2	57.11	26.1	30.8	23.8	73.8	S, NW	6.8	4.5	Ci., Ci.-S.	Cu. SW	8.6	☊ a. ● p. ⌐◹ a. p.
3	57.27	26.2	30.5	23.3	73.4	S quad.	6.4	6.3	A.-Cu. E	Cu., Cu -N. SW	7.4	☊ a. ● p. ⌐◹ a. p.
4	57.54	26.6	31.6	23.6	72.3	Variable	4.5	6	Variable	cu. cu.-N. w quad	.5	≡° ☊ a. ● ⌐◹ p.
5	57.96	26.5	30	24.3	73.3	SSW	5	5.8	Ci.-S., A.-Cu.	Cu.-N. NNE	3	☊² ● a. ⌐◹ a. p.
6	57.95	26.4	30.9	23.7	73.8	E, SE	5.3	4.2	Ci., Ci.-S.	Cu. WSW	29.2	≡° a. ●² p. ⌐◹ a. p.
7	57.61	26.8	30.6	23	73.7	SW	8.1	5.8	Ci.	Cu. SW	68.8	☊ a. ⌐◹ ●² p.
8	57.76	27.1	30.5	23.3	72.5	SW	7.1	8.3	Ci.-S.	Cu., Cu.-N. SW	7.9	●² ≡ ○ a. ⌐◹ d² p.
9	57.77	27.3	30.5	24.2	67.2	SW quad.	7.3	4.3	Ci.	Cu. SW	3.8	≡° ☊ a. ⌐◹ ●° p.
10	57.84	27.8	31	24.1	65.8	SW quad.	9	4.3	Ci., Ci.-S.	Cu. SW, WSW	-------	≡° ☊ a. ◟ p.
11	57.89	27.2	31	23.9	68.2	SW quad.	7.4	5	Ci.-S.	Cu. WSW	-------	☊ a. ⌐◹ p.
12	58.28	27.5	31	24.8	68.4	SSW	6.9	6.2	A.-Cu. E	Cu. SW	-------	☊ a. ⌐◹ a. p.
13	57.22	27	31	24.1	69	SW quad.	8.6	5.8	Ci.-S.	Cu. W quad	5.1	☊ ○ a. ● ┬ p.
14	57.12	26.6	30.8	23	70.3	W quad.	7	7.2	Ci.-S.	Cu.-N. WSW	21.6	≡° ☊ ○ a ⌐◹ ● p.
15	57.80	26.2	29.9	23.2	75.8	SW	4.2	7.2	Ci.-S.	Cu. SW	2	≡° ● a. ⌐◹ d² p.
16	57.62	26.2	30.5	23.3	73.5	Variable	5.1	6	A.-Cu. NE	cu.,cu.-N. w quad	12.7	≡° a. ● a. p ⌐◹°p.
17	57.11	27.2	31.3	23.9	71.5	Variable	5.9	4.2	Ci.	Cu. E	-------	≡° ● a. ⌐◹ p.
18	57.40	27.2	31	23	69.8	NE quad.	7.7	3.8	Ci.	Cu. E	-------	☊ d a.
19	57.43	27.9	31.1	24.2	67.2	E	7.4	3.5	Ci.	Cu. ENE	-------	≡° ☊² a. ⌐◹ ☋ p.
20	57.38	26.8	31	24.7	75.3	Variable	7.4	5.8	Variable	Cu., Cu.-N. ENE	5.6	☊ d a. ⌐◹ ☋ ● p.
21	57.95	26.5	30.8	23.9	73.8	NE	4.7	6.8	Ci.-S.	N.-Cf. E	-------	d ● a. ⌐◹ p.
22	58.35	25.8	30.5	23.5	74.2	Variable	6.3	6.3	Ci., Ci.-S.	Cu., Cu.-N. E, NE	11.9	☊² a. ● ⌐◹ ☋ p.
23	57.29	26.5	29.9	23.3	71.3	NE quad.	7.2	6	Ci.-S.	Cu. E	-------	☊² ◡ ○ a. ◟ p.
24	56.74	27.2	31.5	24.3	68.3	Variable	5.9	4.3	Ci., Ci.-S.	Cu. E, SSW	-------	☊ a. ⌐◹ p.
25	56.10	27.3	31.8	23.9	67.2	S	5.6	3.8	Ci.	Cu. SSE, S	-------	☊ a. ⌐◹ p.
26	56.32	27.6	31.9	24.2	69.1	Variable	6.9	3.3	Ci.	Cu. E	-------	≡° ☊ a. ⌐◹ p.
27	57.10	28.1	32.4	24.9	68.9	NE quad.	6.4	3.2	Ci.	Cu. ENE	4.9	≡° ☊ a. ⌐◹ p.
28	57.70	27.4	32	22.9	71	S, NW	7	4.5	Ci.	Cu. E, ENE	-------	≡° ● a. ⌐◹ p. ◟
29	57.71	27.5	31.8	24	70.2	SW quad.	8.4	5.3	Ci., Ci.-S.	Cu. SSW	10.9	☊ ◠ a. ⌐◹ ● p.
30	56.62	27.1	31	24.2	74.2	SW quad.	8.4	6.5	Ci.-S.	cu.,cu.-N.,wsw,sw	4.6	≡° ○ a. ◠ ◟ p. ●
31	56.90	27.5	31.8	24.9	66.6	SW quad.	6.9	5.3	Ci.-S.	Cu. SW	-------	☊ ○ a. ◟ p.
Mean	757.44	27	31.1	23.8	70.9	----------	6.7	5.3	----------	----------	-------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	227.8	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.00	27.5	30.5	24.4	77.2	SW	12.7	6.3	Ci.-S.	Cu.	-------	
2	57.42	26.6	29.7	23.1	81.5	SW	12.3	8	A.-Cu.	Cu.	-------	☊ ◠ a. ◟ d p.
3	57.46	26.7	30.4	24.5	82.2	SW	14	6.5	Ci.	Cu. SW	0.3	d p.
4	57.86	26.9	30.3	24	77.2	SW	13.3	6.8	A.-Cu. E	Cu.	-------	◟ p.
5	58.18	26.6	29.5	23.8	82	SW	10.2	6.8	A.-Cu.	Cu.	-------	☊ a. d p.
6	58.24	25.8	31	23.3	84.3	SW	7.3	6.8	Ci.-S.	Cu. SW	-------	┬ ⌐◹ d ◟ p.
7	57.79	27	30.5	22.4	79.7	WSW	13.1	6.5	Ci.-S. E	Cu. SW	-------	☊² a. ◟ a. p.
8	57.95	27.5	29.6	25.5	76.8	SW	17.5	6.7	A.-Cu. E	Cu.	.3	● a. ◟ p.
9	58.13	27.3	30.9	24.9	77.2	SW	14.8	7.5	A.-Cu.	Cu.	8.1	◠ d p.
10	58.12	27.3	30	23.8	77.8	SW	14.1	8.2	A.-Cu.	Cu.-N. WSW	10.4	● a. p. ◟ p.
11	58.10	27.3	30.1	24.5	82.7	W, SW	11.6	8.7	A.-Cu.	Cu.-N. SW	15.7	● a. p. ◠ ◟ p.
12	58.68	27	29.6	24.4	78.2	W, S	13	7	Ci., Ci.-S.	Cu. SW	-------	◟ a.
13	57.49	26.2	30.2	23.5	79.8	SW	17.4	6.8	A.-Cu.	Cu. SW	-------	☊ a. ◟ p.
14	57.26	26.9	30.5	23.4	80.5	SW	14.7	7.3	Ci.-S. E	Cu. SW	1.5	☊ a. ┬ d p.
15	57.88	27	30.9	24	73.8	SW	17.3	7.2	Ci.-S.	Cu. SW	.5	● a. ◟ p.
16	57.70	26.5	30.5	22.7	79.3	SW	9	6.3	Ci.-S.	Cu.	-------	
17	57.38	27.2	31.4	23.3	77.8	SW	6.2	5.7	A.-Cu.	Cu.	-------	☊ a.
18	57.54	27.8	34.2	23.6	73.8	Variable	5	4.7	A.-Cu.	Cu.	.8	◟ ⌐◹ ● p.
19	57.44	28.1	33.5	24.3	69.5	NE quad.	8.3	4.8	Ci.	Cu.	-------	◡ p.
20	57.47	26.8	33.5	23.5	75.8	NE quad.	8.1	7.7	Ci., Ci.-S.	Cu.	17.8	┬ ● p.
21	58.14	26	30	23.1	80.3	SW	5	9.3	Ci.-S.	Cu.	10.4	● ≡ d a. ● p.
22	58.68	25.8	30.1	22.8	82.2	Variable	7	9.2	Ci.-S.	Cu.	2.6	● a. p.
23	57.75	26.1	31.8	22.7	80.7	NE	5	8.5	Ci.-S.	Cu. NNE	12.7	● ⌐◹ p.
24	56.99	26.3	30.1	23.4	82	Variable	6.3	7.3	Ci.-S.	Cu.	-------	◠ a. ◟ p.
25	56.45	26.8	31.1	23	78.5	SW	6.7	7.7	Ci.	Cu.	-------	◟ p.
26	56.64	27.2	31.1	23.9	77.5	SW	6.7	5.5	Ci.	Cu.	.3	┬ ⌐◹ ●° p.
27	57.39	27.1	32.5	23.1	79.8	NE	5	4.3	Ci.	Cu.	5.8	⌐◹ ◟ ● p.
28	57.92	27.1	31.4	23.8	78.7	SW	7.1	5.7	Ci.	Cu.	-------	◟ p.
29	57.89	27.8	30.8	24	74.8	SW	17.5	5.8	Ci.-S. E	Cu.	4.8	◟ p.
30	57.94	27.4	29.8	24.4	77.2	SW	18.1	7.5	Ci.-S., A.-Cu.	Cu.	2.3	● a. ◟ p.
31	57.42	25.8	28.6	22.8	83	SW	11	9.5	A.-Cu. E	Cu. SW	50.3	◟ ↙° ● a.
Mean	757.72	26.9	30.8	23.7	78.8	----------	10.8	7	----------	----------	-------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	144.6	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.10	26.5	30.9	23.1	85	SE quad.	3.9	7.2	Ci.-S.	Cu. NWbyW	------	☾ ● d a. ☇ a. p.
2	57.33	26.1	31	22.2	83.7	N quad.	3.7	5.7	Ci.-S. E	Cu.	------	☊ ≡° a. ☇ p.
3	57.35	26.1	30.5	22.5	84.7	N quad.	5.4	7.2	A.-Cu. E	Cu. N	26.7	☊ ☇ ≡° a. ☇ ⊤ p.
4	57.71	26.3	30.5	22	84.5	SW quad.	3.3	6.2	Ci.-S.	Cu.	.8	● ≡° a. ☾ ☇ p.
5	58	26.6	31.6	23.5	84.2	N	5	5	A.-Cu. E	Cu. EbyS	------	d ≡° a. ☾ ⊤ p.
6	58.14	26.6	31.6	22.5	83.1	N quad.	3.3	5.8	A.-Cu. SSW	Cu.-N. NW	1	☊ ≡° ⊤ a. ☾ ☇ p.
7	57.65	26.9	31.4	23.2	81	S quad.	6.5	7.2	Ci.-S. E	Cu.-N., Cu.	21.1	d ≡° a. ☇ p.
8	58.03	26.1	30	21.2	83.9	SE quad.	6.2	8.8	A.-Cu. NE	N.	45.7	≡° ☇ a. ☈ ● a. p.
9	58.06	26.3	30.9	21.9	80.8	SSE	7.5	6.7	Ci. E	Cu. SSW	1.3	≡° a. ☈ d p.
10	58.15	26.6	31.1	22.4	80.7	S quad.	8	7.5	Ci.	Cu.-N.	54.1	☊ ≡° ☾ °a. ☈ ●² p.
11	58.09	26.4	30.2	22.3	83.3	SE quad.	5.1	7.5	Ci.-S. E	Cu.-N.	16.5	☾ a. ☈ ≡ p. ☇ ●
12	58.58	25.4	30.3	22	89.4	SE quad.	5.5	8	Ci.-S. E	N. W	6.9	≡° ☈ a. ● ☇ ☋² p.
13	57.32	26.7	31.1	22.4	82.6	Variable	5.5	8.5	Ci.-S. E	Cu.-N.	2.3	● a. ≡ ☇ ⊤ ☋ p.
14	57.40	26.1	30	23.6	83.3	SE quad.	4.9	9.2	Ci.-S.	Cu.-N. SE	66.7	☈ ≡ a. d ⊤ ☇ p.
15	58.05	25.8	29.9	22.1	85.7	S quad.	3.2	7.8	Ci.-S.	Cu.-N.	2.8	●² ≡° a.
16	57.97	26.2	30.3	22.9	80	SE quad.	4.9	5.8	Ci. NE	Cu.	------	d ≡ a. ☇ p.
17	57.35	26.5	31.9	22.3	82.3	S quad.	5	4.3	Ci.	Cu.-N. E	------	☊ ≡° a. ☇ p.
18	57.58	26.4	32.2	21.1	79.5	Variable	5.3	3.8	Ci. E, NE	Cu.-N. E, NE	------	☊ ≡° a. ☋ p.
19	57.58	26.4	33	21	80.8	NW quad.	4.4	6.5	Ci. E	Cu.-N. E	------	☊ ≡° ☾ °a. ☇ ∪ p.
20	57.69	25.2	30.1	22.5	89.3	N	3.2	8.7	A.-Cu. EbyN	Cu.-N. E	14.3	☇ ☊ ☈ a. ● a. p.
21	58.16	25.8	30.4	22.3	87.8	SE quad.	3.6	9.8	Ci.-S., A.-Cu. SE	N.	1.8	d a. p. ≡ p.
22	58.59	25	30.4	21.8	89.5	N	3.5	7	A.-Cu. E	Cu.-N. NE	12.2	≡° d a. p. ☇ ∪° p.
23	57.58	25.9	31	21.4	83.8	NW quad.	3	8.5	Ci.-S. E	Cu.-N.	------	☊ ≡° ☾ °a. ⊤ ☇ p.
24	56.94	25.8	30.5	21.7	85.3	N quad.	4	6.2	Ci., Ci.-S.	Cu.-N.	------	☊ ≡° ☾ °a. ⊤ ☇ p.
25	56.40	26.2	32.3	21.8	83	S	4.4	5.2	Ci. E	Cu. E	------	☊ a. ⊤ ☇ p. ≡°
26	56.70	25.7	31.7	21.1	79.8	NW quad.	4.5	3.7	Ci. NEbyE	Cu.	------	☊ ≡° a. ☈ p.
27	57.50	24.9	32	19.2	82.8	N quad.	4.3	4.5	Ci.	Cu.-N. NEbyE	------	☊ a. ⊤ ☇ p.
28	57.87	26.8	31.7	22	82.4	S quad.	4.4	6	A.-Cu. NE	Cu.-N.	------	≡°a. ☇ p.
29	57.95	26.7	31.2	22.5	82.8	SE quad.	5.8	7.3	Ci. E	Cu.-N.	16.5	☊ ≡° a. ☈ a. p. d
30	57.80	26.1	29.3	23	87.8	E quad.	5.7	9.8	Ci.-S.	Cu.-N. S	11.4	☈ ● a. p. ≡ p.
31	57.22	26	32	22.7	86.8	SE quad.	7	9.5	Ci.-S.	Cu. WSW	25.9	● ⊤ a. p. ☈ ☇ p.
Mean	757.70	26.1	31	22.1	83.9		4.8	6.9				
Total											328	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.33	27.3	33.5	24	84.2	ESE, WSW	0.3	4.8	Ci.-S. NEbyN	Cu. WSW	------	☊² a. d ☇ p.
2	57.67	26.4	32.7	23.5	87.3	WNW	.3	5.2	Ci.-S. E	Cu., N.-Cf. WNW	------	☊ a. d° p.
3	57.68	26.2	33.3	23.6	86.8	N quad.	.3	5.3	Ci.-S. E	Cu., N. NW	1	☊² a. ● p.
4	58.06	27.4	33.4	23.5	82.9	NW quad.	.5	5.5	Ci.-S. E	Cu. W, WNW	7.1	☊² a. ● p.
5	58.22	27.7	33.3	23.6	82.5	NW quad.	.5	5.2	Ci.-Cu. W	Cu. W	------	● a.
6	58.31	28	32.7	24.5	83.3	Variable	.5	3.7	Ci.	Cu. ENE, NE	1.3	☊² ● a.
7	57.93	28.3	34	24.5	82	NW quad.	.8	6.3	Ci.-S. E	Cu.,Cu.-N.WNW	13.7	☊² ☾² a. ⊤ ☈ p.
8	58.12	27.4	32.5	24	84.9	NW quad.	.3	7.8	Ci.	Cu.-N. N	------	●² ☾² a. ☇ a. p.
9	58.06	28.2	33.6	24	80.3	ESE	.7	5.5	Ci. ENE	Cu. W	------	☇² p.
10	58.11	28.3	33.5	23.8	78.3	Variable	.5	6.8	Ci. NE	Cu. SW	------	☊² a. ☇ ☾° a. p.
11	58.41	27.2	30.2	24.3	81.8	SE quad.	.5	8.2	Ci.	Cu.-N. SSW, SW	1.5	☇ a.
12	58.74	27.2	32.7	23.6	83.3	Variable	.7	6.7	Ci.-Cu. E	Cu.-N. WSW	------	● ⊤ a. ☇ p.
13	57.39	28.2	32.8	23.8	80.2	E	.3	7.2	Ci.-S. E	Cu. W	------	☊² a.
14	57.75	27.2	32.4	24.3	80.1	NW	.8	8.2	Ci.-Cu., Ci.	Cu.-N. W	------	☇ a. ⊤ ☋° p.
15	58.15	27.5	32	24.7	78.8	NW quad.	.7	8	Ci.-S.	Cu.-N. WSW	.8	☇ ●° a.
16	58.04	27.8	33	24.5	78.8	ESE	.7	6	A.-S., Ci.	Cu. SW	10.7	☾ a. ● p.
17	57.85	28.3	33	24.6	79.8	SSE	1	5	Ci.	Cu. SSW	------	
18	58.14	28.3	33.2	24	80.5	S quad.	.7	4.7	Ci.	Cu.-N. S	------	☾ d a. ☾² ☋² p.
19	58.24	27.9	33.5	24.5	80.2	SSE	.8	6.5	Ci.-S. NNE	Cu. S	------	d ⊤ p.
20	58.32	26.1	30.9	24.3	89.1	SE	.5	8.7	Ci.-S.	N., Cu.-N. SE, E	22.1	●² a. p.
21	58.72	27.7	32.5	23.7	81.8	SSE	1.7	8.7	Ci.-Cu. N	Cu. SE	2.6	● a.
22	59.09	27.2	31	24.4	84.2	S quad.	.8	7	Ci.-S. NNE	Cu. SE	------	● a. ☾² p.
23	58.08	27.2	32.5	24	84	ESE, S	1	8.2	Ci.-S. NE	Cu.-N. SE	------	
24	57.53	27.2	33.5	23.6	81	Variable	1	6	Ci.-S. ENE	Cu. SE, SW	------	
25	56.88	27.6	33.2	23.5	80.6	SE quad.	.7	5.8	Ci. ENE	Cu. SSW	------	☊² a.
26	57.10	27.9	33	24.3	80.5	S quad.	1	4.2	Ci.-Cu. E	Cu. SW	------	☋° a.
27	57.73	28	33.8	23.8	78	SSE	.3	5.2	Ci.-S. E	Cu. SWbyS	------	☋² ☊ a.
28	58.11	27.8	35.1	24.2	80.3	SE, W	.7	4.5	Ci. E	cu.,cu.-N.SW, WSW	------	☊ a.
29	58.01	28	33.6	24	84	Variable	.3	6.2	Ci.-S. E	Cu., Cu.-N. SW	16.2	☋² a. ☈ p. ● a. p.
30	58	26.8	33.8	24.8	85.5	WNW	.5	7.2	Ci.-Cu.	Cu.-N. SW	6.4	● ⊤ ☇ p.
31	57.33	28	33.8	23.8	77.6	Variable	.5	6.8	Ci. E	Cu. WSW	------	⊕° a. ☾² a. p. ☇ p.
Mean	758	27.6	33	24.1	82		.6	6.3				
Total											83.4	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.11	27.2	31.1	23	81.6	SE	1.2	8.3	Ci.-S.	S.-Cu., cu.-N. sw	------	☿° d° ◟ p.
2	57.48	27.4	31.5	24.1	81.7	Variable	1.2	5.8	Ci. SE	Cu, Cu.-N. S, SW	------	☊ a. ◩◪ ◠° d ◟ p.
3	57.34	27.2	31.2	24.6	82.8	SE	1.2	4.3	Ci. NE	cu.-N., cu. sw, nw	------	☿ ◟ p.
4	57.92	26.6	30.7	23.1	84.3	SE	1.2	6.7	Ci.-S.	N. SW	.6	◟ ☊ a. ◩◪ ●° ◟ p.
5	58.19	26.5	31.2	22.7	83.6	SE	1.2	6.7	Ci.-S. SE, SW	N. SW	1.5	d a. ◩◪ ●° p.
6	58.32	26.4	31	23.4	83.8	N quad.	1	5.5	Ci.	S.-Cu., Cu. SW	------	☊ a. ◩◪° ◟ p.
7	57.80	27.3	32.8	22.6	81.2	SE	1.5	5.8	Ci.	Cu. S	------	◩◪° d° p. ◟ a. p.
8	57.77	27.1	32.1	24.3	85.2	SW	1.2	6.3	Ci.-S.	S. SW	22.4	◟ ☊ a. ◩◪ ● ◟ p.
9	57.86	26.6	31.6	22.8	85.2	SE	1.2	6	Ci., Ci.-S.	Variable SW	46.8	☿ ●² ◩◪ p.
10	57.85	27	31.4	22.5	85.2	SE, NW	.8	7.8	Ci.-S.	N. S	.8	●° ☿° ◟ p.
11	57.77	27.4	32.4	24.2	84.2	SW	1.2	7.7	Ci.-S.	N. S	12.2	● ◩◪ p.
12	58.47	26.6	31.4	23.1	87.3	S	1.2	5.3	Ci.-S. S	Variable S	------	◩◪ ♉° ◡° p.
13	57.29	27	31.8	21.9	82.9	S quad.	1	3.8	Ci.	Cu.-N. S	------	☿° ♉ ◡° p.
14	57.44?	27	31.2	22.1	84.1	S quad.	1	5.3	Ci.-S. E	cu.-N, N.-cf. SE, NE	------	☿ p.
15	57.90	26.2	29.5	23.5	87.5	S quad.	1.8	9.7	Ci.-S.	N. E, SW	2.1	☿° ◠ p. ●° a. p.
16	57.56	27.4	31	21.9	85.4	S quad.	1.3	6.2	Ci. S, E	Cu. Squad.	17.2	d° a. ●² p.
17	57.26	27.8	31	23.3	83	S quad.	1.2	5	Ci.-S. E	S., Cu. S	------	☊² a. ☿° ◟ p.
18	57.70	27.8	31.6	22.7	83.9	SE, NW	1	3.7	A.-Cu. E	Cu. S	------	◟ p.
19	57.60	28.2	32	24.2	82.9	NE	1.3	7.2	Ci.	Cu. S	5.1	◩◪ ● ☿ a. ◟ p.
20	57.59	27.7	31.9	24.7	85.2	E quad.	1.2	7.3	Ci.	Cu., N. E, NE	25.6	☊ a. ● p.
21	58	26.4	30.1	23.2	87.6	NE, S	1	9.3	Ci.-S.	N. SW, SE	18	● a. p. ☿ ◩◪ p.
22	58.78	27.2	30.5	23.2	82.9	NE	1.2	8	Ci.-S.	Cu. Variable	3.6	◟ a. ●° a. p.
23	57.74	27	29.9	23.5	88	NW, NNW	1	7	Ci. E	Cu. NE	.8	☊ ⊕ ○ a. ☿ ●° p.
24	57.08	26.6	29.8	22.6	87.2	Variable	.7	9	Ci.-S. SW	N. SW	1.3	d p a. ☿ ● ◟ p.
25	56.32	26.8	31	22.6	85	SE, S	1.2	7.7	Ci.-S. E	Cu. SE	1	⊕° ○° a. ☿ ◩◪ ● p.
26	56.81	27.7	31.8	22.5	81.3	NNW	1.3	5.2	Ci. SE	Cu.-N. N, SW	------	☊ a. ☿ ◩◪ p.
27	57.48	27.8	32	23.8	80.5	Variable	1.2	4.2	Ci., Ci.-S.	Cu. NE	------	☊ a. ◟ p.
28	57.91	27.7	32.5	23.6	80.5	Variable	1.3	6.7	Ci. NE	Cu. NE, NW	------	☊ a. ◟ p.
29	57.86	28.1	32.2	23.4	78.5	SW	1	6.8	Ci.-S.	N. SW	------	☿° p.
30	57.52	27.5	32.9	23.7	80.2	SW	1.3	7.2	Ci.-S.	N. SW	.8	◠° ⊕ ○ a. ◩◪ ●° p.
31	56.82	27	31.5	23.2	80.5	W	2.5	7	Ci -S. S	N. W	1.5	⊕ ○ a. ♈° ●° ◩◪ p.
Mean	757.66	27.2	31.4	23.2	83.7	----------	1.2	6.5	----------	----------	------	
Total	--------	------	------	------	-------	----------	--------	----------	----------	----------	161.3	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.16	27.4	33.6	24	83.1	Variable	1.2	6.3	Ci.-S. NE	S.-Cu. W	------	◟ a. p.
2	57.49	27.4	33.5	23.4	83.2	NNW, WSW	1.2	4.5	Ci.-S. E	S.-Cu. W	7.9	● ◟ p.
3	57.53	27	32.3	23.6	85.2	NW quad.	1.2	4.8	Ci.-S. E	S.-Cu. W	1.5	d p.
4	57.97	27.5	31.3	24.2	81.8	Variable	1	6.2	A.-Cu., Ci.-S.	S.-Cu. W, WNW	.3	d° a. ◟ p.
5	58.28	27.1	32.7	24.6	83.7	Variable	1.2	6.3	Ci.-S. S	N. W	------	☿ d° a. ☿ p.
6	58.24	26.6	30.7	23.6	86.5	N quad.	1.2	4.7	Ci.-S.	S.-Cu. W	23.4	● a. ◟ p.
7	57.84	27	31.9	23.7	84.2	NNW	1.5	4.5	Ci.-S.	S.-cf. W	12.7	◟ p.
8	57.83	27.2	30.9	23.8	83.2	W quad.	1.7	7.2	A.-Cu. NW	S.-Cu. WSW	2.5	● a. ◟ p.
9	57.95	28.2	32.3	24.7	79.5	SW	2.3	6.7	Ci.-S.	S.-Cu. SW	2.5	p a. ◟ p.
10	58	27.9	32.5	24.8	79.6	SW	2.5	7	Ci.-S.	S.-Cu. SW	8.9	◟ p.
11	58.21	27.3	30.9	24.1	81.7	S quad.	1	8.2	A.-Cu.	S.-Cu. SW	14	◟ ● a. ◟ p p.
12	58.66	27.2	31	23	83.3	SW	1.3	6.8	Ci.-Cu. NE	S.-Cu. SW	9.4	● ♉ p.
13	57.15	28.7	31.4	25.2	77	SW, WSW	2.5	6.3	Ci.-S. NE	S.-Cu. W	------	◟ ◡ p.
14	57.25	28.2	31.7	24.9	79.3	WSW	2	7.7	A.-Cu. E	S.-Cu. W	34.5	
15	58.15	26.6	30	23.8	86.3	WSW	1.5	7.7	A.-Cu. E	S.-Cu. W	22.3	●² a. ♉ p.
16	57.86	26.6	31	23.7	84.3	Variable	.8	4.3	Ci. E	N. W	------	p° ●° a. ♉ p.
17	57.67	26.2	32.4	22.7	84.9	N	1	2.2	Ci.-S. ESE	Cu.-N. E	------	☿ ◟ p.
18	58.11	26.8	32.4	22.8	84.2	N	.8	2.8	Ci.-S.	S.-Cu., Cu.-N. E	------	d ◡ ♉ ◟ p.
19	58.24	26.9	34.4	21.7	81	N, SW	.7	3.7	Ci. ESE	S.-Cu. E	------	☊ a. ◡ ♉ ◟ p.
20	58.12	25.3	31.3	22.9	89.6	SSE, NW	.3	7	A.-Cu ESE	S.-Cu. E	69.8	●² d p.
21	58.49	26.3	31.5	22.8	86.3	N quad.	1.3	8	Ci.-S. ESE	S.-Cu. SSE	------	d ⊕ a. ☿ ♉ ◟ p.
22	59.10	25.6	31.5	22.7	88	N	.8	5.5	Ci.-S.	Cu. E	11.4	♉ a. ● ◩◪ ◟ p.
23	58.06	25.4	31.5	22.7	92.2	N quad.	.7	9.3	Ci.-S.	S.-Cu.	6.6	● ◟ p.
24	57.25	26.2	31.1	22.7	86.2	N, SW	1	5	Ci. NE	S.-Cu. SW	------	☊² a. d ◩◪ ◟ p.
25	56.74	26.6	31.7	22.7	84	N, SSW	.8	4.5	Ci. N	S.-cf. S	------	♉ ☊ a. ◟ p.
26	57.02	26.9	33.2	22.8	82.9	N	1	2.7	Ci., Ci.-S.	Cu.	------	☿° ◩◪ p.
27	57.62	27.1	31.8	22.6	83.1	N	.8	3.5	Ci. NE	S.-Cu. SSW	------	◟ p.
28	57.95	28.4	32.9	23.6	78.2	SW	1.8	6	Ci.-S.	S.-Cu. SW, W	------	◟ p.
29	57.82	28.2	34	24.6	79.2	W quad.	2	6.2	Ci.-S. S	S.-Cu. WSW, W	------	◟ a. p.
30	57.58	29.2	33.3	26.4	74.7	SW	2.7	6	Ci.-S. SE	S.-Cu. WSW	------	d a. ◟ p.
31	56.88	29.2	32.3	27.4	74	SW	2.8	7.3	Ci.-S.	S.-Cu. WSW	------	∞ ◟ p.
Mean	757.85	27.2	32	23.7	82.9	----------	1.4	5.8	----------	----------	------	
Total	--------	------	------	------	-------	----------	--------	----------	----------	----------	227.7	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h*	*0–10.*			*mm.*	
1	757.55	27.4	32.8	23.5	79.8	WSW	5.8	4.8	Ci.-S.	Cu., cu.-N. WSW, W	-----	☽° a. ☽ ☾ p.
2	56.91	26.2	33.4	22.3	83.3	W	5.1	4	Ci.-S.	Cu. WSW	0.5	☌ a. p. ☾° ☽ p.
3	56.99	26.1	34.1	22.6	84.8	WSW	5.6	3.8	Ci.-S.	Cu.-N. W	98.6	●² ☽ p.
4	57.54	26.2	33.8	22.6	87.7	SW, NW	3.8	3.3	Ci.	Cu.	31.2	● ☾ p.
5	57.78	27.3	32.6	23.3	82.8	Variable	4.2	4	Ci.-S., A.-Cu.	Cu.-N. SE	------	
6	57.66	28.3	34.4	23.1	77.9	WNW	5.4	4.2	Ci., Ci.-S.	Cu. WSW	------	☌° a. ☾ p.
7	57.15	28.6	34.3	23.9	79	WSW	6.5	3.3	Ci.	Cu. WSW	------	☾ p.
8	56.99	27.4	33.6	23.6	80.8	WSW	8.1	6.3	Ci.-S.	Cu., cu.-N. SW, WSW	2.3	● a.
9	57.05	28.2	33.6	24.4	77.7	WSW	7.7	5.5	Ci.-S.	Cu., Fr.-N. WSW, SW	------	●° ☾ a.
10	57.16	27.8	33.1	24.4	75.6	WSW	8.7	6.8	Ci.-S.	Cu.-N., cu. W, WSW	------	☾° p.
11	57.22	28	34.6	23.9	76.2	WSW	7.3	5.5	Ci.-S.	Cu. SW	------	☾° p.
12	57.72	28.2	33	24	77	SW quad.	8.5	6.5	Ci.-S.	Cu.-N., Cu. WSW	2.5	☌° ● a.
13	56.56	28.2	34.7	24.9	77.2	WSW	8.3	5.3	Ci., Ci.-S.	Cu. W	------	☌°
14	56.60	28.4	33.9	24.8	78.2	W, WSW	7.4	4	Ci., A.-Cu.	Cu. W	------	☾° p.
15	57.43	27.1	32.7	24.5	82.2	SW	6.1	5.3	A.-Cu. S	N. WSW	.3	☌° a.
16	57.24	27.4	34.5	23	81.2	WSW	4.3	3.7	Ci.	Cu., Cu.-N., SW, W	3.6	● ☾ p.
17	57.04	27.7	33.2	23.2	------	Variable	4.8	2.5	Ci.	Cu. SW, S	------	☾° p.
18	57.63	28.7	33.4	22.5	------	E	7.3	1	Ci.	Cu. SSW	------	☾° p.
19	57.84	27.7	32.6	23	------	E quad.	6.8	2.5	Ci., Ci.-S. ENE, E	Cu.	------	☾ p.
20	57.76	27.2	32.7	22.7	------	NE quad.	6.9	5.8	Ci.	Cu.-N. E	16.7	● ☌² p.
21	58.18	27.4	31.6	24.2	------	E	4.7	7	Ci.-S.	Cu. S	1.3	● a. p.
22	58.57	27.5	32.5	22.9	------	E, ESE	2.6	1.8	Ci.	Cu. S	------	☾ p.
23	57.83	25.7	27.5	23.1	------	NE	1	8.3	Ci.-S.	Fr.-N. Cu.-N. ENE	2.5	☌° ● a.
24	56.86	26.6	32.6	22.1	------	Calm	.7	5.2	Ci.-S.	Cu., cu.-N. SSW, S	------	☽° p.
25	56.31	25.8	34	22.6	88.8	Calm	.5	5.2	Ci.	Cu., Cu.-N. SW, S	3.8	☌ ● ☽° p.
26	56.63	27	32.8	22	83.4	WNW	2.2	4.2	Ci.	Cu., Cu.-N. SW, S	------	☾° p.
27	57.05	27.8	33.1	22.5	78.7	WSW, W	3.8	3.5	Ci., Ci.-S.	Cu., Cu.-N. SW, S	.5	●° ☌° a. ☽° p.
28	57.47	27.5	32.6	23.1	81.7	WSW	5.7	4.2	Ci.	Cu. SW, W	1.4	●° a. p.
29	57.01	28.3	33.5	24.5	77.8	W quad.	8.2	4.3	Ci.	Cu., cu.-N. W, WSW	.3	●° a. ☾ p.
30	56.71	28.2	33.3	24	77.8	WSW	8.4	5.2	Ci.-S.	Cu.-N, cu. W quad.	16.6	● a ☾ p p.
31	56.21	26.8	32.1	23.5	84.7	WSW	8.9	8.3	Ci.	Cu., Cu.-N. WSW	1.8	● a. p. ☾ p.
Mean	757.25	27.4	33.1	23.4	80.6	----------	5.7	4.7	----------	----------	-----	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	183.9	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.48	26.7	33.4	22.4	81.3	SW quad.	9.4	9	Ci.-S., Ci.	S.-Cu. SW	------	☊° a. ☐☿ d° ☾ p.
2	56.56	26.2	32.4	22.2	83.2	SW	9.9	6.7	Ci., A.-Cu. NW, W	S.-Cu., Cu. SW	1.8	☊° a. ●° ☾ p.
3	56.67	26.9	33.3	21.8	82.3	SW	10.5	6.5	A.-Cu. NE by E	Cu.-N. NW	4.8	☌² ☐☿° ☾° p.
4	57.13	28	33.9	22.4	78.7	SW	---------	5	Ci.	Cu., S.-Cu. SW	6.1	☊° ≡ a. ☐☿° ☾ p.
5	57.47	27.2	32.4	23.4	83.4	SW	---------	6.7	Ci.	S.-Cu. SW, SE	.3	●° ◠° a. ☌² ☾ p. ☐☿
6	57.38	27.2	33.9	23	82.5	SW	---------	6.3	Ci. ENE, E	S.-Cu. W	3	☋° a. ☐☿ d ☾ p.
7	56.95	27.9	33.7	22.7	80.2	SW	11	5.2	Ci. E	S.-Cu. SW, W	------	☐☿ ☾ p.
8	56.58	27.9	33.4	24.4	77.8	SW quad.	11.2	6.8	Ci. E	Cu. SW	------	☐☿ p.
9	56.45	28.5	33.6	22.5	71.2	SW quad.	11	7	Ci. E	Cu. SW	------	☐☿° ☾ p.
10	56.46	29.1	34.1	24.9	65.8	SW	11.8	6.2	Ci. NE	Cu. SW	------	☾ d° p.
11	56.83	28.1	33.5	22.3	74.5	S, SW	9.5	5.2	Ci.-S. E	Cu. SW	------	
12	57.20	28.9	34.9	22.6	70.2	SW quad.	13	5.8	Ci.	Cu. SW, WSW	------	
13	56.05	28.8	34.4	22.9	69.1	SW	11.4	2.7	Ci. E	Cu. W	------	☽ ☾ ☋° p.
14	55.97	28.8	34.5	24.4	71.9	SW	10.5	2.8	Ci.	Cu. W	------	☽ ☋° p.
15	56.96	27.3	33.3	22.7	78	SW	11	4.8	Ci. E, SE	Cu. SW, WSW	------	☋° p.
16	56.81	28.4	34.5	22.1	71.3	SW quad.	11.5	4	Ci. ESE	Cu. SW	------	☾° ☋° p.
17	56.78	28.6	34.9	23.2	77	SW	8	5.8	Ci. E	Cu. Variable	2.8	☐☿ d² ☋² p.
18	57.41	28.1	35.9	23.5	78.8	SW	8.6	2.8	Ci.	Cu. ESE, S	------	☊° a. ☐☿° ☾ ☋² p.
19	57.65	28.4	35.9	22.8	78.6	SW	10	4.5	Ci. E	Cu. SE	------	☋° a. ☐☿ ☋° p.
20	57.50	28.5	34.9	22.8	77.3	NE, SW	11.3	5.7	Ci. E	Cu. SE	------	☋° a, ◯ ☾ d° p.
21	58.04	26.1	33.1	22.9	90.7	SW	7	9.8	A.-Cu. E	S.-Cu. E, SE	7.9	☊² ≡ ☐☿° ● d° ☋°
22	58.48	27.6	33.2	23	79.9	SW	8.4	8.3	Ci. SE	S.-Cu., Cu. S. SE	6.1	☋° ☊° a. ☐☿° ☾ ● p.
23	57.43	26.9	31.7	22.7	83.8	SW	11	9.5	Ci. E	S.-Cu. NE	8.6	☌° a. ☾° ☐☿ ◯² p.
24	56.35	27.3	31.8	22.9	79.8	S quad.	9.2	9.7	A.-Cu. E, SE	S.-Cu. S	------	● ◯² a ☐☿ d° ☾ p.
25	56.27	27.4	32.3	22.5	83.3	SW	8.6	7.2	Ci. E	S.-Cu. S	------	☋° ☊° ≡ ◯° a.
26	56.32	27.1	33.5	22.8	84.7	SW	8.6?	5.7	Ci.	S.-Cu. S	7.1	☋° ≡° ● a. ☐☿ ☾ p.
27	56.63	28	34	22.8	79	SW	10	7.3	Ci.-S. NE	Cu. SW, W	------	☋° ◯° a.
28	57.12	28	33.8	21.5	71.3	SW	11.6	8.2	Ci. NE	Cu. SW	------	☊° a. ◯° a. p.
29	56.67	28.8	33.7	24.2	71.7	SW	---------	8.8	Ci. NE	Cu. W	------	◯° a. p. ☾ p.
30	56.24	28.3	33.4	26	70.2	SW	14	8.7	A.-Cu. W, NW	S., N. W	------	☌ ☾° p.
31	55.40	28.9	33	25.2	71.3	S quad.	13.8	7	Ci. NE	S.-Cu., S. W	------	◯° a.
Mean	756.88	27.9	33.7	23.1	77.4	----------	10.4	6.4	----------	----------	-----	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	48.5	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ISIDRO.

[$\phi = 15°\ 22'$ N; $\lambda = 120°\ 53'$ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.74	26.1	30.9	23.3	83.8	SW, SSW	1.3	9.2	Ci.-S. NNE	N., S.-Cu. WSW	------	⊕° ≲ p.
2	56.72	25.2	30.9	23.5	90.3	S quad.	1.7	7.5	Ci. ESE	S.-Cu. SSW	15.2	☊² d² a. ●² ⊤ ≲ p.
3	56.53	26	31.2	22	87.8	SSE	1.5	5.8	Ci. NE	Cu. SSW, SW	2.3	☊² ≡ a. ●° ≲ p.
4	57.02	27.8	32.7	23.2	80	SSE	1.7	4.8	A.-Cu. SW	Cu. S	------	☊² a. ⌒° ≲ p.
5	57.38	28.1	33.7	24	82.2	SSE	1.2	6.2	Ci.-S. ESE	Cu. SSW, S	------	☊² ≡ a. ⊤ ≲ p.
6	57.40	28	33.6	23.2	81.2	SSW	1.5	7	Ci. E	Cu., N. S	2	☊² ≡ a. ⌐⌙ ≲ ●° p.
7	57.26	26.6	33.6	23.5	88	SSW	1.2	6.7	Ci. E	Cu. S	1.3	☊ a. d ⌐⌙ ≲ p.
8	56.92	26.8	33	24	84.1	S quad.	1.3	6.3	Ci. NE	S.-Cu. SW	.3	☊ ≡ ○° a. d° a. p.
9	56.83	26.5	32.7	22.5	86.2	SSW	1.7	7	Ci. ENE	N. SW	7.4	☊ ≡ ○° a. ⊤ ● p.
10	56.56	26.5	31.7	23.5	86.2	SSW	1.7	6.7	Ci. NE	N. SW	------	☊ a. d° p.
11	57	25.9	31.9	23.5	89.5	SSW	2	7.7	ci.,ci.-S. ENE, NNE	N. SW, SSW	2.1	☊ ○° a. d° ⌐⌙ ● p.
12	57.93	26.1	32.6	23.5	87.2	SSE	1	7.5	A.-Cu. SW	N. WSW	1.8	⊕° a. ●° d° p.
13	56.34	27.1	31.4	23.4	84.2	SSE	1.3	5	A.-Cu. SW	Cu. SW quad.	------	☊ ∞ a. ≲ p.
14	56.30	26.6	32.8	23.9	86.7	SSW	1.5	5.5	Ci.-S. ENE	Cu. SW	20.1	☊² a. ●² ⊤ ⌒ p.
15	56.90	27.5	32.3	23.2	81.5	SSW	1.8	4.8	Ci. ENE	Cu. SW	------	☊ ≡ a. ⌒° p.
16	56.84	28.2	33.2	24.6	81.3	SSW, SE	1.2	6.5	A.-Cu. SW quad.	Cu. S quad.	.3	☊² a. ⌒° ⊎° p.
17	56.81	28.2	33.3	24	82	S quad.	1.2	5.3	Ci., Ci.-S. ESE	Cu.-N. SE	------	☊ d° ○° a. ⌒° ⌐⌙ p.
18	57.40	28.9	34.2	22.5	78	SSE	1.2	6.8	Variable	Cu., Cu.-N SE	16	☊² a. ⌒° ●² ⌐⌙ p.
19	57.51	28	34.7	24.6	81	S quad.	.8	5.7	Ci. E	cu.-N., S.-Cu. NE, NW	.5	d° ☊ a. d² ⌐⌙ p.
20	57.45	27.9	34.3	23.8	78.5	Variable	1.3	5.7	Ci. NE	Cu. NE	------	☊ ○² a. ⊕² ⌐⌙ ∪² p.
21	57.78	26	30.6	23.7	88.5	SSW, ENE	.8	8.3	Ci. NE	N., Cu. E quad.	2.3	d° a. ○² d² ≲ p.
22	58.38	26.7	32.5	23.2	84.8	SSE	1.5	6.7	Ci. NW	Cu., N. SSE	------	☊ ≡ ○² a. ○° ≲ p.
23	57.67	26.9	33.7	23	83.3	W quad.	1	8	Ci. SE	Cu., N. NE, NW	33.7	☊² ≡ ○° a. ●² ⌐⌙ p.
24	56.43	24.1	25.9	22.9	94.7	WNW, ENE	1.5	10	A.-S.	N. E quad.	21.8	d° a. p. ●² ≲ p.
25	56.12	26.2	32	22	86.3	Variable	1.2	7.3	Ci.-S. ESE	S.-Cu. NW	------	∪² ☊ ≡ ○° a.
26	56.37	26.4	31.8	22.3	85	SE	1.5	6.3	Ci. ENE	Variable	------	☊² ∪² a. ⊤ ≲ p.
27	56.88	26.8	32.2	23.4	85	Variable	1.2	7.3	Ci. NE	Cu. W	4.3	☊² ≡ a. ⌐⌙ ● p. ○°
28	57.38	26.6	31.8	23.4	84.3	NNW	1.2	7.8	A.-Cu. NW	N. SW	6.6	
29	57.12	25.8	30.3	22.6	88.5	W quad.	1	8.7	A.-Cu. NW	N.,S.-Cu. W quad.	1.3	● d² a. ☊² d° p.
30	56.50	25.8	30.7	23	87.8	SW	1.7	9.2	Ci.-S. NE	N. SW	.8	☊ ○² a. ○° d ⌒° p.
31	55.66	26	29.8	23.2	87.7	SW, SSE	1.8	9	Ci.-S. NE, NW	N. SW	1.8	d a. ≲ p.
Mean	757	26.8	32.1	23.3	85	----------	1.4	7	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	141.9	

DAGUPAN.

[$\phi = 16°\ 03'$ N; $\lambda = 120°\ 20'$ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

	mm.	*°C.*	*°C.*	*°C*	*Per ct.*		*K'm. p. h.*	*0–10.*			*mm.*	
1	757.44	27.2	33.7	23.1	86.2	SE	7.7	9.5	A.-Cu.	S.-Cu. SE	------	○ a. ≲° p.
2	56.61	24.8	27.7	23.2	96.7	S quad.	6.3	9	A.-Cu.	S.-Cu., N. SW	6.5	d° a. p. ● ⌒ p.
3	56.32	26.8	34.4	22.7	89.2	SE	8.7	7.2	Ci.-S., A.-Cu.	S.-Cu. SE, S	5.1	d p ⊤ ⌒ ≲° p.
4	56.86	27.9	34.3	24	85.5	SE	10	7.7	A.-Cu.	S.-Cu. SE	6.9	⌒° ⊤ p ≲ p.
5	57.14	28.3	35.6	24.3	86	SE. W	9.2	8.5	Ci.-S., A.-Cu.	S.-Cu. SE	------	⊤ ≲ p.
6	57.23	27.4	34.2	24.7	88	Variable	7.4	8.3	Ci., A.-Cu.	S.-Cu. SE	------	≲° a. p. ⊤ d° p.
7	57.13	27.8	33.6	24.6	87.7	Variable	10.6	9.2	Ci., A.-Cu.	S.-Cu. S	------	⊤° ≡ a. ⌒ ≲° p.
8	56.89	27.2	33.6	23.9	88	Variable	10.3	9.2	A.-Cu.	S.-Cu. SE	------	d° ≲ p.
9	56.61	26.5	32.7	23.3	91.2	SE, N	7.6	7.8	Ci.-S., A.-Cu.	Cu.-N. SW	30.7	p a. d ● p.
10	56.58	26.5	31.3	23.8	92.2	SE	8.7	9.7	A.-Cu.	S.-Cu. SE, W	8.4	● a. d p ≲ p.
11	56.96	25.2	32.8	23.5	94.5	SE	8.7	8.7	A.-Cu.	S.-Cu. SW	27.2	p² ⌐⌙ d p.
12	57.73	25.7	30.4	23	91.7	SE, SW	6.4	7.2	Ci., A.-Cu.	S.-Cu. WSW	1.3	≲° d p° a. ⊎ p.
13	56.21	27.7	32.7	23.9	86.3	Variable	7.1	6.8	A.-Cu.	S.-Cu. WSW, SW	.8	☊² a. ⌒° ⌐⌙ ⊎ p.
14	56.17	27	34.4	23.8	89.7	SE, SW	8	6.8	Ci.	S.-Cu. SW	8.9	p ≲ ⊤ ⊎ p.
15	56.61	28.2	35.1	24.3	85.2	SE quad.	8.6	8.2	Ci.-S.	S.-Cu. SE, SW	------	p a. ⌒² ≲ ⊎ p.
16	56.65	29	35.8	25.2	84.3	Variable	9.8	8.3	Ci., Ci.-S.	S.-Cu. SE	37.3	⊤ ⌒ ≲ p.
17	56.73	28.4	34.4	24.9	87.3	Variable	8.4	8.8	Ci., Ci.-S.	Fr.-Cu., Cu.-N. SE, SSE	------	☊² a. ⌒ ≲° ⊤ p.
18	57.48	29	33.4	25.9	84.8	N quad.	10.4	8	A.-Cu.	Fr.-Cu., S.-Cu. SE, S	------	≲° ⊎ p.
19	57.58	29.2	33.1	25.3	84.4	NW, N	8.7	6.2	Ci.	S.-Cu.	------	⊎° p.
20	57.41	28.5	35.1	24.7	84.7	Variable	8.3	7.3	Ci., Ci.-S.	Cu., S.-Cu.	------	⊤ ≲ ⊎ p.
21	57.53	28.1	34.3	24.1	83.3	SE	8.7	8.7	A.-Cu.	Cu., S.-Cu.	------	⊎² ∪° ☊² a. ○ ≲ p.
22	58.13	28.1	35.1	24	81.3	SE	9.8	8.3	Ci.-S., A.-Cu.	S.-Cu. SSE	------	○ a. p. ≲ p.
23	57.77	28.1	33.1	23.9	80.8	N quad.	10.2	9.3	Ci.-S.	Cu. SE	.3	○° a. ≲ p.
24	56.04	27	31.2	23.2	89.3	SE, SSE	11.9	10	A.-Cu.	S.-Cu. SE, NE	6.7	d a. p. p° p.
25	55.95	27.3	35.2	23	84.8	S quad.	12	8.7	A.-Cu.	Cu. SE	------	●° a. ⌐⌙ p.
26	56.29	27.2	33.4	23.5	85.7	NW quad.	5.9	7.7	A.-Cu.	Cu.-N. W	------	≡° ○° a. ≲ ⌐⌙° p.
27	56.86	27.6	32.8	23.6	84.8	NW quad.	6	8.7	A.-Cu.	Cu., S.-Cu.	47	⊎° a. ○° ≲ p.
28	57.55	25.1	27.5	23	95.2	NW quad.	6.7	10	A.-Cu.	S.-Cu. SW, W	55.2	p² ≲ ⌐⌙² ●° a. ● p.
29	57.12	26.1	29.6	22.9	91	NW quad.	5.8	10	A.-Cu.	S.-Cu. W	16	● d a. p ● p.
30	56.46	25.2	29.2	23	96	S quad.	6	10	A.-Cu.	N. SW, S	5.6	●° d a. p.
31	55.33	26	32.4	23.4	94	S, SE	6.3	9.8	A.-Cu.	s.-cu., N. WSW, W	7.9	⌒ a. ● ⌐⌙ p.
Mean	756.88	27.2	33	23.9	88.1	----------	8.4	8.5	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	271.8	

METEOROLOGICAL DATA, ETC.—Continued.

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.09	26.7	32.5	23.2	85.5	S	2.7	10	A.-Cu., Ci.-S.	Cu.-N., S.-Cu.	3.3	⊤ p. ☇ a. p.
2	56.18	24.4	27.9	23.4	94.5	S	1.5	10	Ci.-S.	N.	17	◠ a. ● a. p.
3	55.89	26.7	32.1	23	86.7	S	2.3	7.7	Ci.-S.	Cu. SSW, S	1.3	☊² ≡ a. ● ↘ p.
4	56.53	27.5	32.4	23.9	84.9	S quad.	2.5	9.7	Ci.-S.	Cu. S	------	☊ ≡° a. d ◠ ☇ p.
5	57.03	27	32.5	24	89.2	S quad.	1.8	10	Ci.-S.	Cu. S	5.6	☊ ≡° a. ● ☈ p.
6	57.14	27.8	32.6	24.6	88	S quad.	1.5	10	Ci.-S.	Cu. S	------	● a. ☈ a. p. ☇ p.
7	56.84	26.3	31.7	23.7	91.2	S quad.	1.5	10	Ci.-S.	Cu.-N.	17	☊° a. ◠ ● p. ☈
8	56.50	25.5	31.4	23.2	91.8	S	2.0	10	Ci.-S.	Cu. SW	7.6	☊ ↙° a. ●° ☈ a. p.
9	56.24	25	29.6	23	94.5	S	2.8	10	Ci.-S.	Cu.-N.	73.9	⊤ ◠ ● a. ☈ ●² p.
10	56.11	25.8	31	23.8	93	S quad.	2.5	10	Ci.-S.	Cu. SW	7.2	p a. p. ● ⊤ ☈ p.
11	56.47	24.9	30.6	23.6	95.3	S quad.	2.8	10	Ci.-S.	N.-cf.	20.8	◠ ⊤ a. ↙° ☇ p. ●
12	57.25	25.5	28.5	22.8	92.2	SSE	1.8	10	Ci.-S.	Cu.-N., S.-Cu.	11.2	● ☈ a. p° a. p.
13	55.78	27.2	32.4	23.6	86.8	S quad.	2.8	9.5	A.-Cu., Ci.-S.	Cu.-N.	0.3	☊ ≡° a. ⊤ ☇ p. p°
14	55.76	26.6	32.1	23.7	89.6	S quad.	2.3	8.5	Ci.-S.	N.-cf. S	29.4	☇ ☊° a. ● a. p.
15	56.44	27.1	32.9	23.2	86.8	S quad.	2.2	9	Ci.-S.	Cu. SW, S	------	d ☈ ☋² p. ☇ a. p.
16	56.55	26.9	32.1	24.1	90.3	S quad.	1.3	10	Ci.-S.	Cu. SW	27.7	☊° a. ● p.
17	56.60	27.3	32.3	24.6	89.5	W	.8	10	Ci.-S.	Cu. S	10.4	☈ ● a. p. ◠ ◡ p.
18	57.52	27.7	31.4	24	84.8	N quad.	1.5	8	Ci.-S.	Cu., Cu.-N.	------	●° ◠ ☈ a. ⊤ p.
19	57.51	28.8	32.2	25	83.3	N quad.	1.8	9.8	Ci.-S.	Cu. NE	------	☊° a. ☋° a. p. ☇ p.
20	57.22	28.5	33.4	24.6	85.3	Variable	1.8	10	Ci.-S.	Cu.	------	☊° a. ⊤ ☇ p.
21	57.42	27.3	33	23.9	87.5	Variable	1.5	9.8	Ci.-S.	Cu.-N., Cu.	35.1	☈ ●² ☇ p. ◡° a. p.
22	57.89	26.8	32.5	24	89	SSE, S	2.2	10	Ci.-S.	Cu.-N.	.5	☊ ≡° a. ☈ ●° p.
23	57.64	28	31.8	23.7	83.2	Variable	2.3	10	Ci.-S.	Cu.-N.	15	◡° ☈ ☊ ≡° ◠² d. ☇
24	57.74	27.4	32	24.2	87.3	S quad.	1.8	10	Ci.-S.	N.-cf.	------	☈ ● a. d² p.
25	55.61	27.3	33.9	24	84.7	SSE	3.2	10	A.-Cu.	S.-Cu., Cu.-N.	9.9	☈ ☇ ● p.
26	56.06	27	31.5	23.4	88.9	S	.8	10	Ci.-S.	Cu., Cu.-N.	2.7	☊ ≡° ●° a. ☇ p.
27	56.61	27.1	31.4	24.4	89	S quad.	1.5	10	Ci.-S.	Cu.-N.	72.6	☊° d a. ◠° ☈ ☃ ☇ p.
28	57.22	24.2	26.7	22.6	97.3	SSW, S	.5	10	----------	N.	88.6	↙° a. ☈ ●² ⊤ a. p
29	56.81	24.8	27.8	22.7	94.3	SW quad.	2.8	10	----------	N.	28.5	⊤ ● a. ↙° ● ☇ p.
30	55.94	25.2	28.6	22.9	91.8	S quad.	2.8	10	A.-Cu.	Cu.-N.	26.7	●° a. ●² p.
31	54.93	25.7	31.4	23	93.7	S quad.	3.7	10	A.-Cu.	Cu.-N. SW	16.1	☈ ◠ ☇ p. ● a. p.
Mean	756.60	26.6	31.4	23.7	89.4	----------	2	9.7	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	528.4	

BAGUIO.[1]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	635.56	17.9	23	15	90.5	W	----------	9.4	A.-Cu. SSW	S.-Cu. WSW, W	------	d a. ≡² p.
2	34.48	17	20.1	15.5	93.3	SW quad.	7	9.6	A.-S.	Fr.-N. SSE, SW	------	☊ a. ≡² p.
3	34.46	17.5	21.6	15	91.2	W quad.	8.6	7.7	Ci.	Cu.-N., N.	5.8	☊ a. ● p d ◠ p.
4	35.17	18.6	24.1	15.9	90.7	E quad.	10.3	8.4	Ci.-S.	S.-Cu. S	------	≡² ⊤ p.
5	35.68	19.1	24.6	16.9	93.7	Variable	10.6	7.9	Ci.	Cu., S.-Cu.	------	☊ a. ≡² ⊤ p.
6	35.84	18.9	23.4	17	92.5	W quad.	10.9	9.1	Variable	Fr.-N.	2.3	d a. ⊤ ≡² p p.
7	35.48	18	22.2	16.1	95.2	W, NW	14.7	9	Ci.-S., Ci.	Fr.-N., N.	35	≡ ●² p.
8	35.07	17.4	22.4	15	92	W	14.5	9.7	Ci. E	S.-Cu. W	50.3	● p.
9	34.90	17.6	21.7	15.2	96	W	17.2	9.3	Ci.	S.-Cu. WSW	46	d a. p. ●² ≡² p.
10	34.71	17.1	19.7	15.6	96.9	W quad.	19	9.7	Ci.	Fr.-N. SW	27.7	● ≡² a. p.
11	35.06	17.1	20.4	15.8	98.8	W quad.	20.8	10	Ci.-S.	N.	39.6	p ↙° p. ≡ ● a. p.
12	35.71	17.2	20.8	16.1	100	W	17.4	10	----------	N.	7.2	● a. p° p. ≡² a. p.
13	34.76	17.5	20.8	15.8	98.5	W	16.6	9.9	----------	Fr.-N. WSW	21.4	≡² p a. ● p. d
14	34.69	17.7	22.3	15.8	97	W	12.4	9.6	Ci.	Fr.-N. SW	2.6	≡ ● p. d a. p.
15	35.18	19	23.6	15.7	92.2	W quad.	7.8	7.7	Ci.	Cu. ESE	1	⊤ ●° p. ≡ a. p.
16	35.19	19.4	23.8	16.8	92.8	E quad.	8.6	8.6	Ci.	S.-Cu. ESE	2.8	⊤ ● ◠ p. ≡² a. p.
17	35.24	19.2	24	17.2	94	E	8.6	9.6	Ci.	Fr.-N. SE	26.7	≡² a. ●² ⊤ ◠ p.
18	36.03	18.9	23.3	17.1	94.9	W quad.	12.8	8.6	Ci.	Variable	8.6	☊ a. ⊤ p ● p. ≡
19	36.26	19.1	23.7	16.6	91.3	NW quad.	10.8	7.9	Ci., Ci.-S.	S.-Cu. NE, W	1.3	●° d ⊤ ☈ p.
20	36.09	18.9	23.2	16.4	91.5	E, W	9.7	9	Ci.-S.	S.-Cu. E	2.6	☊ a. ● ☈ ☃ p.
21	36.09	19.2	23.7	16.5	88.3	E quad.	10.9	9.6	Ci.-S.	Fr.-Cu. E	------	◠° a. ≡² p.
22	36.46	18.8	23.6	16.5	82.5	SE quad.	15.1	8.9	Ci.-S.	S.-Cu. SE	.3	☊° ◠ a. ◠° ●° ⊤ p.
23	36.08	18.4	22.9	16.7	91.3	E quad.	11.6	9.9	Ci.-S.	Cu.-N. ESE	13	☊° ◠° a. ●≡² ☈ ☃ °p.
24	34.37	17.5	21	16.1	89.2	E	22	10	A.-S.	Fr.-N. NE	2	d° a. ● d ◠ p.
25	34.28	18.1	24.1	16	89	E quad.	18.5	9.1	A.-Cu.	S.-Cu. ESE	24.4	d ⊤ ● ☈ p. ≡
26	34.71	17.9	23.2	15.6	93.2	W quad.	13.9	9.4	Ci.	S.-Cu., N. W	24.4	≡ d° a. p. ● p.
27	35.18	17	21.5	15.3	96.5	W	25	10	A.-S.	Fr.-N. W	48.3	≡ ● a. p. ○ ⊕ p.
28	35.23	16.3	17.7	14.6	100	NW, W	31.4	10	----------	N.	30.2	≡² ● a. p.
29	34.76	16.4	17.6	15.4	99.5	W	33.4	10	----------	----------	50.4	≡² ● a. p. ↙ p.
30	34.22	16.5	18	15.5	99.7	W	26.8	10	----------	----------	29.5	≡² d ● a. p.
31	33.67	17	18.3	16	99.8	W, WSW	35.5	10	----------	----------	53.3	≡² ● a. p. ⊤ ☈ ☋² p.
Mean	635.18	17.9	21.9	16	93.9	----------	16.1	9.3	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	556.7	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.34	27.5	30.6	25.1	77.5	Variable	0.8	7.7	Ci.-S.	Cu.-N., Cu.	1.3	d ● a. ↙° p.
2	56.23	26.5	30.7	23.6	82	SE quad.	1.5	6.5	Ci.-S.	Cu.-N., Cu.	9.7	d ● p.
3	56.24	26.8	31.3	23.4	82	SE quad.	1.2	3.8	Ci.-S.	Cu.	4.8	d ● p.
4	56.94	27.2	31.5	24.4	83.8	Variable	1.3	6.8	Ci.-S.	Cu. S	4.6	d° ● p.
5	57.58	27.3	31.5	23.4	81.7	SE quad.	1	4.3	Ci.-S., Ci.	Cu., Cu.-N.	50	d° ◪ ● p.
6	57.53	27.2	31.6	23.2	82.7	SE quad.	1	3.3	Ci.-S.	S.-Cu., Cu.	------	
7	56.94	26.4	30.9	24.5	85.3	S quad.	1	6.2	Ci.-S.	Cu.	12.7	d ● ↙° p.
8	56.70	26	30.6	23.4	84.8	SSW	1	5.3	Ci.-S.	Cu. SbyW	------	d ↙° p.
9	56.31	26.1	30.8	23.3	83.8	SE quad.	1.3	7.3	Ci.-S.	Cu. SSW	10.7	d° a. p. ● p.
10	56.20	26.2	30.7	23	86.3	S	1.3	8.8	Ci.-S.	Cu.-N. SW	52.6	d ●² p.
11	56.40	26.6	30.5	24	84.4	SSE	1.5	8.7	Ci.-S.	Cu.-N. SSW	5.1	●° d ● p.
12	57.14	26.6	30.4	23	84.8	SE quad.	1.5	6.3	Ci.-S.	N., S.-Cu.	22.4	d a. p. ● a. ☋ p.
13	55.81	27.8	31.2	24.6	81	S	1.3	4.7	Ci.-S., A.-Cu.	Cu.	1	d a. ☋ ↙ ● p.
14	55.88	26.9	31.4	23.5	85.7	SE quad.	1	3.5	Ci.-S.	Cu.	6.4	d ● ◪ p.
15	56.77	27.4	31.8	24	82.8	S quad.	1	3.5	Ci.-S.	Cu.	14.7	d ● p.
16	56.84	27.4	31.3	24.4	84.3	SW, SE	.8	3	Ci., Ci.-S.	Cu.	------	
17	56.80	27.9	32.1	25	83.5	Variable	1	6	Ci.-S., A.-Cu.	Cu., Cu.-N.	6.1	↙° ● p.
18	57.73	27.1	32.1	24.3	87.5	Variable	1	3.3	Ci.-S.	Cu.	------	⌒ d ☋ p.
19	57.78	27.8	32.7	24.2	82.2	N quad.	1	3	Ci.-S.	Cu. NNE	------	↙° ∪ p.
20	57.56	28.2	33.4	24.6	80	Variable	.8	3.5	Ci.-S.	Cu.	------	
21	57.61	28.2	32.9	25.4	84.3	E quad.	1	4	Ci.-S.	Cu.	------	d ↙° p.
22	58.26	27.7	32	24.5	85.3	Variable	1.2	6.3	Ci.-S.	Cu. SSW	16.8	☋ a. d ● ◪° ↙° p.
23	57.97	27.3	32.9	24	84.8	N quad.	1	5.7	Ci.-S.	Cu.	------	☋ a. p. ◪ ↙° p.
24	55.85	27.2	31.6	24.3	77.7	Variable	.7	8.7	Ci.-S.	S.-Cu., Cu.	------	d a. d° p.
25	55.92	26.9	32.5	23.6	81.2	Variable	.8	6.3	A.-Cu., Ci.-S.	Cu.	10.1	d ● p.
26	56.24	27.2	31.5	23.3	79.8	Variable	1	5.7	Ci.-S.	Cu.	64.3	d p.
27	56.91	25	27.2	22.9	90.8	S	1	10	Ci.-S.	N.	94.2	●² a. p. ◪ p.
28	56.96	24	25.7	22.8	95	S, SSE	1.7	10	------	N. SSW	136.6	●² a. p. ◪ a.
29	56.42	24.6	26	22.6	94.2	SSW, S	1.7	10	------	N. SW	61.7	●² a. p.
30	55.67	25	28.4	23.3	92.3	S, SSE	1.2	9.8	Ci.-S.	N. SW	36.6	● a. p.
31	55.01	26.5	30.6	23.8	85.3	SSE	1.8	9.7	Ci.-S., A.-Cu.	Cu.-N. SSW	15.3	d a. p. ◪ ● p.
Mean	756.76	26.8	30.9	23.9	84.4	------	1.1	6.2	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	637.7	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.11	27.4	35.1	22.6	77.2	SE, NE	1.7	8	Ci.-S.	Variable	------	d ◪ a. ↙ p.
2	56.16	28.2	36.2	23	76.2	SE, NE	.8	6.8	Ci.-S.	Cu., N. SW	------	↙ Ω² a. ◪ p.
3	55.90	28.8	36.4	23.6	75.7	SE	.5	6	Ci., Ci.-S.	S.-Cu. NW	12.9	Ω a. ● ◪ ↙ d p.
4	56.68	29.5	36.4	24	76.7	SE	.8	7.2	Ci.	Cu. S	------	● a. ↙ p.
5	57.02	30.1	37.3	25	74.7	SE	1.2	6.3	Ci. E	Cu. S	------	Ω a. ↙ p.
6	56.90	29	36.4	25	78.5	SE, N	.5	5.7	Ci.	Cu. S	------	Ω a. ↙° ◪ ↙ p.
7	56.41	27.6	37.4	23.4	78	SE	.5	8.5	Ci.	Cu.-N. NW	4.1	Ω a. ● ◪² ↙° p.
8	55.70	28.2	37.2	22.7	77.9	NW	.8	8	Ci., A.-Cu.	Cu.-N. NW	27.9	Ω a. ●² ◪ ↙ p.
9	55.49	27.4	35.5	23.2	84.1	SE, N	.8	7.7	Ci. SE	Cu. SE	------	↙ d ● ○ a.
10	55.49	27.8	36.4	23.2	83.3	SE	.3	7	Ci.	Cu., N.	28.7	Ω² a. ● ◪ p.
11	55.56	28.2	36	24	83	SE	.8	8.3	A.-Cu. NW	Cu.-N. S	9.7	● ○² a. ┼ ● ◪ p.
12	56.29	28.7	36	24.5	75.9	SE	.8	5.3	Ci. S	Cu.-N. NW	------	○² a. ┼ ⌒² ↙ d p.
13	55.14	28	36.6	23.3	79.5	SE, NW	1	6	Ci.	Cu.-N. NW	26.2	↙ Ω² a. ⌒ ◪ ●² p.
14	55.48	28.4	36.5	24.5	82.3	Variable	.7	2.8	------	Cu. NE	6.6	Ω a. ● ◪ p.
15	56.39	27.9	36.7	24.1	79.5	SE, NE	.5	5.7	Ci.	Cu. SE	------	d ◪ p.
16	56.44	28.5	35.3	24.6	80.8	SE, NE	.7	6	Ci.	Cu. SE	------	d a. ↙ p.
17	56.41	29.3	36.9	25	79.2	SE	.7	5.8	Ci.-S.	Cu. E	------	Ω a. ↙ ☋ p.
18	57.28	28.8	37.3	25.2	80.2	SE	.7	6	Ci.	Cu., Cu.-N. S	------	Ω a. ☋ p.
19	57.73	28.7	36.4	24.5	77	Variable	.8	7.8	Ci. N	Cu. SE	------	Ω a. ↙ p.
20	57.59	28.7	35.6	24.5	79.8	NE	.3	7.8	Ci.	Cu., Cu.-N. SE,E	------	Ω a. ┼ ⌒ ◪ p.
21	57.64	28.6	36.7	23	78.5	SW	.7	7	Ci., Ci.-S.	Cu. S	------	Ω² a. d ◪ ↙ p.
22	57.82	29.8	36.6	24	76.6	SE	1.5	3.2	Ci., Ci.-S.	Cu.-N. S, N	------	Ω² a. ◪ p.
23	58.06	28.2	34.4	23.5	79.7	NW	.5	8.7	Ci.-S.	Cu.-N. NE	8.2	Ω a. ● p.
24	57.76	24.3	27.4	23.5	95.3	NW	.2	8.7	Ci.-S.	Cu.-N., N.	24.9	d ● a. ● p.
25	56.64	26.8	31.9	23.2	86.7	NE	.7	7.8	Ci.	Cu.-N. SE	2.3	● a. p. ◪° p.
26	55.69	28	34.2	23.5	79	SE	.7	7.5	Ci.-S.	N.-cf. NW	------	Ω a. ○² ↙ p.
27	55.71	26.2	30.3	24.1	88.5	SE	.7	9.2	------	N.	13.9	d a. ● p.
28	55.89	25.5	29.2	23	92.5	SW	.2	9.3	------	N.	1.5	● a. p.
29	55.06	27.1	31.9	23.5	87	SE	.3	8.8	Ci.-S., A.-S.	Cu.-N., Fr.-N.	------	⌒ a.
30	54.64	28.1	34.5	23.5	82.5	Variable	.5	7.3	Ci.-S.	Cu.-N. S	------	Ω² a. d ◪ p.
31	53.98	29	34.4	24.3	77.4	SE	.3	7.5	Ci.	S.-Cu. NNW	------	Ω a.
Mean	756.32	28.1	35.1	23.8	80.7	------	.7	7	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	166.9	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[$\phi = 18°\ 22'$ N; $\lambda = 121°\ 38'$ E; barometer above sea, 5 meters; gravity correction not applied, −1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.12	26.8	32	24.1	82.2	S quad.	8.9	8.7	Ci.-S. W	S.-Cu. NW	------	○ a. ⊤ ≤ p.
2	56.26	27.1	32.5	23.1	82.3	S	14	3.7	Ci., Ci.-S.	Cu.-N. N,S	18.3	⊤ ● ≤ p.
3	56.38	27.6	32	23 6	80.2	S, N	9.8	5.2	Ci. SE	Cu.-N. SE	2.3	⊤ p.
4	57.01	27.8	32.6	23.8	79.7	SW quad	10.8	3.7	Ci. E	Cu.-N. S	------	⊏◪ ● a. ⊤ ≤ p.
5	57.29	29	34	24.6	78.4	S quad.	12.5	2	----------	Cu.-N. NW,S	------	⊤ ≤ p.
6	57.34	28.7	32.5	25.5	81.2	Variable	8.3	3.2	Ci.	Cu.-N. NW,SE	------	⊤ ≤ p.
7	56.28	28.2	33	24.1	76.8	S quad.	13.6	5.3	Ci.	S.-Cu.,Cu.-N.	------	⊤ ≤ p.
8	55.42	28.2	33.7	24.1	75.8	S	14.9	6.3	Ci. E	S.-Cu. W	------	⊤ ≤ p.
9	55.44	27.3	34.1	23.6	80.2	S	12.7	6.3	Ci. E	S.-Cu. SE	7.4	⊏◪ ● ≤ p.
10	55.46	27.2	33.1	24	82.2	S, SE	13.4	5.3	Ci. E	N. SW	9.4	⊤ ● ≤ p.
11	55.44	28.4	34	24.5	78.3	S quad.	14.5	5.3	Ci. E	S.-Cu. W	8.9	● ⊏◪ ≤ p.
12	56.10	28.4	33.9	24.1	76.7	S	13.5	4.8	A.-Cu. SW	Cu.-N. W	7.6	● p.
13	54.90	28.6	33.9	24	77.5	S	14.3	4.3	Ci. E	Cu.-N. SE	------	⊤ ≤ p.
14	55.41	28.6	35	24.4	79.2	S	11.4	2.5	Ci.-S., A.-Cu. E	S.-Cu. SW	------	⊤ p.
15	56.51	28.7	34.5	24.5	77.8	Variable	11.1	3.7	Ci., Ci.-S.	Cu.-N. S,N	.8	⊏◪ ● p.
16	56.68	28.7	33.4	24.1	79	Variable	9.5	5.8	Ci., Ci.-S.	Cu.-N. E,NE	------	⊤ ≤ p.
17	56.84	29.1	34	24.6	78.3	N quad.	7.5	1.5	----------	Cu.-N.	------	
18	57.60	28.6	33	25.2	83	W quad.	11.4	2	----------	Cu.-N. S,SW	------	⊤ p.
19	57.94	28.4	33.6	24.6	78.8	N, S	9.9	6.3	Ci. E	Cu.-N.	------	≤ p.
20	57.77	28.5	33.4	24.3	81	SW, NE	9.9	2	Ci. E	Cu.-N. S	------	⊏◪ ≤ p.
21	57.62	28.3	34	24.5	78.8	S quad.	14.3	6.5	Ci., Ci.-S. E	Cu.-N. SE	------	⊤ ⊏◪ p.
22	58.14	29.5	35.4	24.9	73.2	S quad.	16.2	3.8	Ci.-S.	Cu.-N. SE	------	⊏◪ p.
23	58.36	28.2	33.1	24.5	78.6	SW, NE	9.3	8.2	A.-Cu. NE, S	Cu.-N. S	1.3	● ≤ p.
24	57.93	26	30.4	24	86.8	E quad.	7.1	8.5	Ci.-S.	S.-Cu. E	3.8	● a. p.
25	56.72	26.5	31.7	23	82.3	S quad	7.6	8.2	Ci.-S. E,SE	Cu -N. E	.5	☊ ☰ a. ● ≤ p.
26	55.64	26.8	31.9	23.8	83.8	SE quad.	10.6	8.3	A.-Cu. W	S.-Cu. W	1.5	≤ p.
27	55.62	24.9	26.7	23.5	89.5	S	15.6	10	----------	S.-Cu., N. SW	39.1	● a. p.
28	55.43	24.7	26	22.9	89.2	S	16.2	10	----------	S.-Cu. SW	15	● a. p.
29	55.09	24.6	26	22.9	90.2	S	7.9	9.7	Ci.-S.	N. SW	11.4	● a. p.
30	54.66	27.5	31.3	23.2	77.8	S, SW	9.3	8.7	Ci.-S. W,NE	S.-Cu. W	------	○ a.
31	53.87	27.9	32.3	24.6	77.7	Variable	6.6	9.5	A.-Cu. SW	S.-Cu. W	------	
Mean	756.40	27.7	32.5	24.1	80.5	----------	11.4	5.8	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	127.3	

METEOROLOGICAL DATA, ETC.—Continued.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	21.7	95	86	6	10	1.5	☊° d a. ●° ☇² p.
2	32.4	21.8	88	84	6	10	11.2	☊ a. d ● p.
3	31.5	22.3	97	84	7	10	------	☰° a.
4	31.5	22.1	93	83	8	10	.5	☊ a. ●° p.
5	29.6	22	96	79	9	8	8.6	●° a. p. ⌐◪ p.
6	30.2	21.1	96	79	7	9	26.9	● a. p.
7	31.1	21.1	94	81	5	7	1.5	●° a.
8	31.1	21	90	81	8	8	------	☊° a.
9	31.7	21.1	95	64	8	8	------	☊ ☰° a.
10	31.3	21.7	90	70	6	10	------	☊ a. ◡ ° p.
11	32.3	21.9	96	71	7	9	------	☊ ☰° a ◡² p.
12	30.4	22	95	77	5	10	30.4	☊ ☰° ●° a ◡ p.
13	29.8	21.7	93	76	10	10	------	
14	32.1	21.4	87	72	8	10	32	☊ a. ●² p.
15	31	22	90	84	7	6	------	● a.
16	30.8	21.7	91	88	10	8	------	☊ a.
17	31.2	21.5	98	89	6	7	------	☊° a.
18	31.7	22.1	92	91	7	7	44.2	☊² ●° a. ●² p.
19	30.9	21.9	96	87	8	8	------	☊ ☰° a. ◡ p.
20	31.2	21.8	94	93	10	10	25.2	☊ a. ● a. p.
21	30.4	21.4	89	90	8	10	58.9	☊ a. ● a. p.
22	31.9	22.2	98	88	10	7	------	☊° d a.
23	32	22.1	93	90	7	8	------	☊° a.
24	32.4	22.8	99	84	8	10	------	☊° a.
25	32.1	22.4	98	85	8	7	------	☊ ☰ a.
26	32.3	20.5	95	78	6	6	2	☊° a. ●° ☇² p.
27	33.3	22.3	90	92	7	8	2.5	☊ ⌐◪ a. ● p.
28	30.3	21.2	96	90	7	10	34.1	☊ ☰° ●° a. ● p.
29	31.4	21.1	95	82	10	7	9.4	⌐◪ p.
30	32.5	21.9	97	57	7	7	------	☊ a.
31	32.6	21.7	96	73	7	9	------	☊² a.
Mean	31.4	21.7	93.9	81.5	7.5	8.5	------	
Total	------	------	------	------	------	------	288.9	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m	Relative humidity. 2 p. m	Cloudiness. 6 a. m	Cloudiness. 2 p. m	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	21.5	96	73	3	7	------	☊ a.
2	29.3	22	96	84	9	10	34.5	☊ ●² ⌐◪ a. d p.
3	31.3	22	97	94	10	10	16	d a. p. ● p.
4	28.8	22.4	96	96	10	10	5.1	☊ a. ●° p.
5	31.3	22.5	96	78	10	9	24.9	☊ ● a.
6	29.5	22	96	88	10	10	7.7	p a. ● p.
7	30.1	22	97	91	10	10	10.4	p a. ● p.
8	30.3	22	96	85	10	10	------	☊ a.
9	29.8	21	96	85	9	10	1.3	☊ d a. ●° p.
10	29.3	21.2	95	92	9	10	1	☊ ●° a.
11	30.3	21.5	96	78	7	10	------	☊ a.
12	29.8	21.5	96	81	10	10	33.5	☊ a. ┬ ●² p.
13	30.3	22.3	96	85	10	8	48.5	d a. ●² p.
14	30.3	22.5	95	79	10	10	.5	●² a.
15	31.3	21.3	96	79	9	10	------	☊ a.
16	32.3	22	97	74	7	8	------	☊ a.
17	31.3	22.7	96	82	4	10	4.8	☊ a. ●° p.
18	31.8	22.5	97	96	10	10	26.2	☊ a. ● p.
19	31.3	21.5	96	80	2	10	3	☊ a. ●° p.
20	29.8	21.5	92	88	10	10	34.5	☊ ●² a. ● p.
21	28.3	22.5	96	92	10	10	20.5	● a. p.
22	30.3	22.7	96	85	10	10	2	●° a. p p.
23	31.3	22	97	74	10	10	7.1	☊ a. ● p.
24	29.8	21.2	96	92	2	10	3.3	☊ a. ●° p.
25	32.5	21	96	88	1	10	------	☊ a.
26	33.3	21.5	96	87	9	6	------	☊ a.
27	29.8	21.7	97	84	9	10	5.6	☊ d a. ●° p.
28	31.8	22.5	96	96	10	10	21.3	●° a. ● p.
29	31.8	22.8	96	95	10	10	.8	●° a. d p.
30	32.3	22	96	71	9	9	------	☊ a.
31	29.1	22.2	97	92	1	10	7.1	☊ a. ●° a. p.
Mean	30.6	21 9	96	85.3	8.1	9.6	------	
Total	------	------	------	------	------	------	319.6	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	22.4	88	73	3	8	------	☊ a.
2	28.9	23.4	92	68	8	10	1.8	● p.
3	29.9	23	95	69	10	10	1.3	d ● p.
4	29.9	23.1	89	72	10	4	.5	
5	29.9	23.4	91	79	6	8	------	●° ⌒ a.
6	29.7	22.5	87	80	9	3	3	
7	29.1	23.5	90	81	8	8	1.3	● a. p.
8	29.5	22.7	89	69	10	9	------	
9	29.6	23.4	86	81	10	10	------	d a. p. ⌒ p.
10	29.9	21.9	91	83	4	10	2.3	☊ ● a. d a. p.
11	30.5	23	82	74	6	6	------	
12	29.5	24	87	77	10	10	1.8	d a. ┬ ☇² p.
13	29.5	22.9	90	75	10	4	2.3	⌐◪ ● p.
14	29.4	23.5	75	74	4	9	3.3	⌐◪ ● p.
15	31.5	22.4	94	73	4	9	------	☊ a.
16	30	23.4	84	70	8	9	3.3	☊ a. ● ┬ ☇ p,
17	29.4	22.8	89	73	8	10	5.3	☇ p.
18	30.2	23	92	71	4	3	------	● a.
19	30.8	23.3	87	68	6	7	------	
20	30.9	23.9	87	76	9	9	14.5	● p.
21	29	23.1	95	78	10	10	22.8	● a.
22	29.1	23	97	71	10	9	------	● ⌒ a.
23	------	23.5	89	73	10	9	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	30.5	------	88	71	6	9	------	d a.
28	31	23.3	92	100	7	10	68.5	d a. ● p.
29	30.5	22.9	91	71	9	4	------	● ⌒ a.
30	31	24	88	68	9	5	------	∞ p.
31	30.4	23.9	88	70	8	9	------	
Mean	30	23.2	89	74.6	7.7	7.9	------	
Total	------	------	------	------	------	------	132[1]	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	21.3	96	62	6	7	23.6	● p.
2	30.3	20.9	96	69	6	5	------	┬ p.
3	28.3	21.6	96	81	8	8	------	
4	31.1	21.8	96	71	6	7	------	
5	31.7	22.4	97	66	5	6	------	☰ a.
6	31.9	22.5	94	69	5	5	------	
7	30.8	21.7	96	70	6	5	------	
8	31.2	21.4	97	68	6	6	27.4	● p.
9	28.7	21.9	97	78	9	9	18.5	● p.
10	30.6	22.2	96	71	7	6	33	●² ┬² p.
11	30.8	22	98	70	5	6	------	
12	30.5	22.7	97	74	8	7	22.1	● p.
13	29.3	22.5	96	77	5	7	------	
14	30.2	21.5	91	78	5	9	33.5	● p.
15	31.2	21.7	97	62	5	6	------	
16	31.4	22.3	98	70	8	5	23.1	● p.
17	31.8	22.9	97	66	5	5	------	
18	31.7	22.1	96	68	7	5	------	
19	31.8	22.1	95	73	6	5	26.2	● ⌐◪ p.
20	31.3	22.3	96	71	6	5	11.7	● ☇ p.
21	30.4	22.1	97	72	8	6	------	d a.
22	28.7	22	96	93	5	10	36.6	● p.
23	29.9	20.6	96	71	6	8	------	
24	31.5	20.2	97	69	6	6	------	
25	32.2	21.1	97	65	5	5	------	
26	32.7	22.2	96	66	6	5	------	
27	32.6	21.9	97	66	6	7	------	
28	30.7	22.3	94	70	6	8	------	
29	32.3	22.5	97	65	5	6	------	
30	32.6	21.9	97	64	5	7	------	
31	31.7	21.6	93	60	6	5	------	
Mean	31	21.9	96.1	70.2	6.1	6.4	------	
Total	------	------	------	------	------	------	255.7	

[1] 28 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.1	21.5	93	59	3	4	------	♌ a. ☾° ☇° p.
2	32.3	21.6	92	64	5	5	------	♌ a. ☿° p.
3	33.3	22.2	88	63	4	5	2.5	♌° a. d p.
4	32.5	21.4	89	59	6	7	------	☇ p.
5	33	21.8	90	62	4	8	------	♌° a. ☇ ☿° p.
6	31.9	21.3	95	65	9	7	4.1	♌° ≡° a. d ☇ p.
7	31.4	22	92	62	9	8	8.6	● ☇ p.
8	30.5	21.3	90	68	8	9	2.5	d ☇ p.
9	32.3	21.3	91	59	6	7	4.3	♌ a. d p.
10	31.2	21.8	95	68	2	10	3.3	d ☇ p.
11	30.9	22.4	90	68	3	6	14.5	☈ ● p.
12	31.5	22.5	92	69	7	9	.3	d ☇° p.
13	32.4	22.3	89	59	3	4	1	d p.
14	31.2	22.3	89	70	8	10	16.5	● p.
15	31.3	22.2	96	64	8	5	14.7	● p.
16	32.5	22.4	97	54	10	7	.3	d a. p.
17	31.4	22.4	89	67	2	7	.3	d p.
18	31.6	21.9	94	72	1	8	------	☿° ☋² ☇° p.
19	30.8	22	92	68	3	9	------	♌ a. d° ☋ ☇° p.
20	31.6	22.4	91	73	6	10	------	♌ a. ☋° p.
21	30.1	23	90	67	6	7	68.6	♌² a. ☈ ● p.
22	30.7	21.4	96	81	10	9	1.5	● a. d° ☇° p.
23	31.2	21.7	96	65	9	8	------	☇° p.
24	33	22.3	94	63	0	3	------	♌² a. ☇° p.
25	32.9	22.4	94	63	4	2	11.4	♌ a. ☈ ● p.
26	32.4	22.6	93	67	2	2	------	☇° p.
27	31.6	22.2	89	70	1	7	------	♌° a. ☇° p.
28	31.9	22.8	92	69	5	4	------	♌ a.
29	31.5	23	93	64	6	7	1.6	♌² a. ● p.
30	32	22.5	93	66	9	8	------	☇° p.
31	31.8	22.8	93	67	8	9	------	♌ a. ☿° ☇° d° p.
Mean	31.8	22.1	92	65.6	5.4	6.8	------	
Total	------	------	------	------	------	------	170.4	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.5	24.2	90	63	9	5	------	♌ a. ☇ p.
2	32.7	23.7	93	67	7	5	12.2	♌ a. ● ☇ p.
3	31.6	22	89	73	8	9	------	● a.
4	30.8	23.4	90	69	9	9	------	☽ a.
5	32.4	23	89	69	4	7	------	
6	32.7	24.6	89	65	7	5	------	d ☇ p.
7	32.4	23.7	89	65	6	7	2	☇ p.
8	------	23.3	88	66	9	6	------	● a.
9	30.1	23.5	92	76	5	10	------	
10	------	22.9	86	64	4	6	------	♌ a.
11	30.4	22.6	88	70	9	5	------	
12	30.7	24.3	83	69	6	7	------	○ ⊕ ☇ p.
13	------	25.2	87	69	8	6	1.3	
14	30.4	23	90	72	10	5	3.6	● a. p.
15	31.7	23.5	89	68	10	5	------	☇ p.
16	32.4	23.9	88	70	10	7	------	
17	31.8	24.2	91	72	8	6	------	♌ a. ☋ ☿ ☇ p.
18	32.1	24.3	88	72	7	5	3.6	♌ a.
19	32	23.9	90	63	7	6	2.3	● a. ☋ ☇ p.
20	31.2	23.7	86	74	8	5	2.8	● a. p. ☋ ☇ p.
21	32.1	23.9	89	70	7	7	5.8	○ ● ☈ p.
22	32.4	23.5	90	69	9	6	1.5	● p.
23	31.2	23.9	87	67	8	5	------	
24	31.4	23.8	88	66	7	4	------	
25	31.2	25	87	68	6	5	------	☿ p.
26	31.2	24.7	87	67	7	5	------	
27	32	24.5	91	71	8	5	1.8	♌ a. ☿ p.
28	31.8	24.8	88	69	7	9	------	● a.
29	32.3	25	88	69	9	7	------	
30	32.6	24.6	89	71	9	5	------	
31	32.4	23.8	92	72	8	10	------	○ d° p.
Mean	31.8	23.9	88.7	68.9	7.6	6.3	------	
Total	------	------	------	------	------	------	36.9	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	23	95	61	8	6	------	♌ a. ☇ p.
2	31.6	22.5	92	68	3	9	3.6	♌ a. ● p.
3	30.8	23	96	67	8	9	3.6	♌ a. ☿ ● p.
4	30.5	22.6	93	75	7	8	------	♌ a. d° p.
5	31.3	23.1	95	73	7	7	------	♌ a. ☇ p.
6	31.5	23.6	94	78	2	8	------	♌ a. ☿ d ☇ p.
7	32.5	23.6	94	67	8	7	3.6	● ☈ p.
8	29.5	22.2	96	68	8	9	------	♌ a. ☾ p.
9	32.3	22.5	95	67	8	6	1.5	♌ a. ☈ ● p.
10	30.6	22.5	95	70	6	8	------	♌² ⊕ a.
11	32.3	22.7	93	61	6	8	------	♌ a. ☇ p.
12	29.5	22.5	96	68	9	9	------	♌ a. ☿ p.
13	30.8	22.5	95	68	2	8	------	♌ a. ☇ p.
14	29.1	23.2	95	73	7	10	15.7	♌ a. ● p.
15	29.8	22.6	96	70	9	7	2	d° a. p. ●° p.
16	31.3	23	94	66	10	6	2.3	♌ a. ☈ ● p.
17	33	22.4	95	72	5	7	9.9	♌² a. ● ☾ ☿ p.
18	32.3	23	93	73	3	7	1	♌ a. ● ☿ p.
19	29.8	22.9	95	84	7	8	22.6	♌ a. ● ☾ ☿ p.
20	28.5	22.6	96	87	9	8	------	♌ a. d a. p. ☾ p.
21	32	23	95	70	7	9	.3	♌ a. d a. p.
22	29.2	22.5	96	80	8	9	7.4	d a. p. ● p.
23	29.8	22.5	96	70	9	8	------	♌ a ⊕ ☇ d p.
24	31.7	23.1	95	70	7	7	------	♌ a. ☇ p.
25	32.3	23	95	63	3	3	10.2	♌² a. ☈ ● p.
26	32.5	22.9	91	59	5	6	------	♌² a. ☇ p.
27	32.6	23.6	93	68	1	7	1	♌ a. ●° ☈ p.
28	31.3	23.1	94	60	1	6	------	♌ a. ☿ p.
29	30.8	23.3	91	61	6	7	5.1	♌ a. ☿ ● p.
30	31.8	23	93	76	6	7	.8	♌ a. ☿ ● p.
31	32.5	23.4	93	60	2	6	------	♌ a. ☿ p.
Mean	31.1	22.9	94.4	69.5	6	7.4	------	
Total	------	------	------	------	------	------	90.6	

DUMAGUETE.

[ϕ=9° 18′ N; λ=123° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	22.8	78	71	10	9	------	♌ ○ a. ☿ p.
2	31.9	23.7	79	73	10	10	------	♌ ○ a. ☈ d p.
3	31.9	23.1	87	67	10	10	2.5	♌ a. d ☿ ● p.
4	31.3	23.1	91	73	10	7	3.5	♌ a. ☈ p.
5	31	23.8	95	71	10	9	.5	● a. ☇ p.
6	32.5	23.5	86	72	10	7	------	♌ ○ a. ☇ p.
7	32	23.6	87	74	10	9	------	♌ ○ a. ☇ p.
8	32.1	23.3	92	73	10	10	------	○ a. p. ☈ p.
9	33.8	22.5	83	54	9	10	12.2	♌ a. ● ☇ p.
10	33	23.3	89	67	7	10	------	♌ ○ a. ☇ p.
11	32	23.3	83	69	10	10	------	♌ a. ☇ p.
12	31.4	24	87	71	10	10	------	
13	31.4	23.1	86	75	10	10	------	♌ a. ☇ p.
14	30.4	24.5	83	68	10	10	3.3	○ a. p. ☈ p.
15	30.5	23	95	70	10	9	------	● a. ☾ p.
16	30.5	23	86	65	10	9	------	d a. ☇ p.
17	31.4	24	87	72	10	4	1.5	♌ a. ☈ ☋ p.
18	30.5	23.5	93	74	4	4	------	● a. ☈ p.
19	31	24.5	88	70	10	10	11.4	d ☈ a. ○ ☇ p.
20	31.9	24.2	92	76	6	10	13.7	● a. ☇ p.
21	30	23.5	96	76	10	10	30	● a. p. ○ ☈ p.
22	30.5	22.3	90	66	10	10	1	○ a. ☋ ☈ p.
23	30.5	23.3	91	74	10	10	------	♌ a. ○ a. p. ☇ p.
24	31.6	23.6	86	72	10	10	------	♌ a. ☿ ☇ p.
25	31.3	23.7	82	70	10	8	------	♌ a. ☇ p.
26	32.7	24.2	84	68	10	5	------	♌ a. ☇ p.
27	32.8	24.3	79	72	7	8	9	♌ a. ☾ ☇ p.
28	31.5	24.7	94	71	10	8	2	● a. ☈ p.
29	31.9	23.3	87	67	10	10	------	● a. ☇ d p.
30	33.5	24.8	89	72	10	10	------	○ ♌ a. d ☇ p.
31	34.5	22.8	77	49	5	10	------	○ a. ☄° ☈ p.
Mean	31.7	23.6	87.2	69.7	9.3	8.9	------	
Total	------	------	------	------	------	------	90.6	

METEOROLOGICAL DATA, ETC.—Continued.

YAP (Western Carolines).

[ϕ=9° 29′ N; λ=138° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	23.4	95	77	9	8	0.8	○ ⊕ a. p. d p.
2	31	23.8	96	73	6	6	.8	d ⊕° a. ○° a. p. ◠
3	30.3	24.5	96	74	8	4	.2	● d° a.
4	31.6	24.2	94	70	1	2	------	☊ a.
5	31.5	24.4	94	75	2	5	------	☊ a. ◠° p.
6	31.8	24.1	91	76	5	7	4.1	☊ p ⊕° a. ○° ● p.
7	31.8	24.6	94	71	6	5	------	
8	31.7	24.7	92	77	1	6	3	☊ a. d p.
9	29.9	24.1	96	78	10	8	52.5	☐↙° ● a. d a. p.
10	26.7	23.3	99	88	10	9	3.8	● a. d° ◡° p.
11	30.2	23.5	97	75	8	8	------	○° a. d° ◠° ◡° p.
12	27.9	23.6	92	90	10	9	7.1	● d a. p.
13	29.2	23.1	96	99	7	10	42.6	⊕° a. ● ◡° p.
14	30.5	23.6	91	97	2	8	4.1	⊕ a. ● d° p.
15	30.6	23.8	92	81	5	5	1.3	☊ a. ☋° ● p.
16	31.9	23.9	93	72	5	5	.3	⊕° ○° ●° ↘° p.
17	31.5	24.8	96	73	5	8	------	○ ◡° p.
18	27.9	24.6	85	91	10	10	2.6	d a. d° ◡° ☋ p.
19	30.9	24.4	91	70	10	5	.3	d a. ◡° p.
20	31.3	24.7	93	75	4	4	11.7	☊° a. d ◠° ● p.
21	31.4	24.6	96	75	6	5	.3	d° ↙° p.
22	30.4	25	87	75	8	6	7.7	● a. ◠° ●° p.
23	31.9	24.4	92	70	4	6	------	○° a. p. ↙° p.
24	32.7	24.3	88	72	4	4	1.5	☊ ⊕° a. d° p.
25	30.1	24.3	92	82	8	8	22.1	◡² d ● a.
26	30.5	23.2	98	78	9	5	5.1	● ◠° a. p.
27	32.3	24.3	94	66	5	6	7.9	● a. p. ○ ⊕² ◠° ↙°
28	31.7	24.5	84	80	2	8	5.1	○° a. ● p.
29	31.7	23.3	95	76	9	5	9.1	d° a. ◠° a. p. ↙² p.
30	30.5	23.9	95	90	10	10	33.3	● d a. p.
31	28.5	23.9	99	83	10	10	------	● a. d° a. p ↙° p.
Mean	30.7	24.1	93.3	78.3	6.4	6.6	------	
Total	------	------	------	------	------	------	227.3	

MAASIN.

[ϕ=10° 08′ N; λ=124° 50′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	24.5	93	79	10	7	------	
2	31	24.4	92	78	10	10	------	☐↙² d p.
3	31.5	23.4	90	79	6	10	31.7	↙ ●² p.
4	28.8	23	91	85	10	7	36.6	◠° d° a. ☐↙ ●² p.
5	30.5	23.6	96	83	10	6	------	d ◠² a.
6	31.5	23.8	94	79	10	10	------	↙ p.
7	31.2	23.8	93	78	10	10	21.1	☐↙² ●² p.
8	32	22.8	91	78	10	10	------	↙² p.
9	30.5	22.8	87	79	10	10	------	↙ ◡° p.
10	29.6	24.1	91	79	10	10	------	
11	30.1	24	93	79	8	10	30.5	┬² ◡² ↙ p.
12	30	24	95	88	10	10	50.3	●² ↙² a.
13	31.5	23.1	95	78	10	10	40.1	↙° a. ☐↙² ●² a. p.
14	31.2	23.3	91	82	10	10	34.5	●² d a. p. ↙ p.
15	30	22.5	93	69	10	4	8.1	◡² ☐↙ ●° p.
16	31	23.5	91	82	10	6	------	d a. ↙ p.
17	30.4	23.5	94	78	6	5	------	◡² ☋° p.
18	31.5	23.8	92	78	6	7	------	
19	32	23.2	91	81	10	10	------	◡² ↙ p.
20	30.8	23	92	81	10	10	------	↙² ◡° p.
21	31	24.5	93	78	10	8	------	
22	30.6	24	93	82	10	10	------	┬ ◡² p.
23	29.4	23.6	92	78	10	10	------	
24	30.6	23.7	91	81	5	4	------	◡ ↙ p.
25	29.8	23.8	91	81	10	8	------	
26	30.4	24.2	92	78	10	5	------	
27	31.1	24	92	74	10	8	------	
28	31	24.2	93	80	10	9	15.7	☐↙² a. p. ● p.
29	31	24.2	95	75	10	10	31.5	┬° d ●² p.
30	31.4	23.9	93	80	10	10	------	↙ p.
31	29.5	23.6	92	74	10	10	------	↙ p.
Mean	30.7	23.7	92.3	79.2	9.4	8.5	------	
Total	-----	------	------	------	------	------	300.1	

SAN JOSE BUENAVISTA.

[ϕ=10° 44′ N; λ=121° 55′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	22.4	92	71	10	8	1	● a. ●° p.
2	29	23.1	89	85	7	10	5.6	● ◠ a. d a. p.
3	30.6	23	91	85	2	10	76.8	● a. p. d p.
4	29.6	23.2	96	75	10	4	4.5	● a.
5	29.7	23.5	95	78	10	7	2.1	● a. d p.
6	30.4	23.6	94	82	8	10	.3	d p.
7	31.1	22.7	91	73	4	7	.8	d ●° p.
8	31.2	23.3	91	90	10	10	33.8	● a.
9	30.5	22.5	95	77	3	10	72.1	● a. p.
10	29.6	22.1	86	79	10	10	12.4	● a. p.
11	31	23	92	81	10	8	1.8	●° p.
12	28.7	24	90	78	10	10	.5	d° a.
13	31.1	23.1	90	75	9	10	12.7	●° a. ● p.
14	30.5	22.8	91	71	3	4	39.4	d ● p
15	28.1	22.7	91	81	10	10	3	● a.
16	30.6	22.9	90	73	10	3	------	
17	31.4	23	90	69	2	4	------	
18	31.7	23.4	87	72	4	8	3.3	● p.
19	31.8	23	91	71	1	6	------	↙ ◡ p.
20	32	22.5	86	71	4	10	47.8	☐↙ ● p.
21	30.3	23.1	96	76	10	3	13.5	d p.
22	28.7	23	94	76	10	10	23.1	● a. p.
23	30.6	22.5	91	82	7	10	10.2	● p.
24	30.3	22.4	95	72	10	4	------	↙ p.
25	31.5	22.5	86	75	8	6	------	↙ p.
26	31.6	23.9	87	72	2	4	------	p° p.
27	31.5	23.5	86	71	2	8	------	
28	31.4	23.6	88	72	4	10	4.1	☐↙ p.
29	30.5	23.1	91	74	10	6	.3	● a.
30	30.1	24.1	90	81	10	10	38.9	● a.
31	29.5	23.5	95	84	10	10	11.9	● a.
Mean	30.7	23.1	90.9	76.5	7.1	7.7	------	
Total	------	------	------	------	------	------	419.9	

CUYO.

[ϕ=10° 51′ N; λ=121° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	22.7	98	71	9	7	1.3	● a. ●° p.
2	32.4	24.4	96	73	8	8	4.6	d² ● p.
3	31.7	24	96	69	9	7	74.2	●² p.
4	31.6	23.5	95	81	10	10	3.6	d° ● a.
5	30.3	24.2	97	81	10	9	7.4	● a. ●° p.
6	30.6	25.1	94	95	9	10	9.4	☐↙° ● p.
7	32	24.4	92	73	10	9	------	d a.
8	27.4	24.8	91	87	10	10	49.3	●² a.
9	31.5	23.4	97	76	9	9	20.8	d ● p.
10	30	23.3	97	83	10	10	13.7	● a. ●° p.
11	32.3	24.7	96	71	9	8	------	⊕ p.
12	27.7	25.5	95	91	8	9	4.1	● ┬ a.
13	32.7	24.4	97	75	8	9	11.2	● p.
14	32.5	23.7	97	79	9	8	1.5	◠ ●° a. ⊕ p.
15	31.4	24.7	93	67	10	9	11.7	● a. p. ⊕ p.
16	31.8	23.4	98	69	9	5	1.8	●° a.
17	32.1	24.1	97	70	7	7	------	d° p.
18	31.8	24.1	97	71	6	6	------	☊ a. d p.
19	32.5	24.6	95	71	7	8	------	
20	31.9	24.1	95	71	9	9	23.6	☊° a. ●² ☐↙° p.
21	30.6	23.7	95	86	9	9	89.4	d ●² p.
22	28.9	22.8	92	84	10	9	1	●² a. d p.
23	31.7	23.5	97	71	8	7	------	
24	32	24	94	70	10	7	------	d a.
25	32.9	23.7	95	71	9	8	------	
26	33.1	24	95	68	7	7	------	⊕ p.
27	32.7	24.4	95	67	7	7	------	
28	32.2	23.9	95	70	8	9	.8	
29	32.3	24.8	93	74	9	8	------	●ᶜ a.
30	32.1	26.5	89	73	9	9	------	⊕ p.
31	32.2	26.7	90	75	9	9	3.6	●° p.
Mean	31.5	24.2	94.9	75.3	8.7	8.3	------	
Total	------	------	------	------	------	------	333	

METEOROLOGICAL DATA, ETC.—Continued.

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	22.6	98	91	2	10	4.6	d a. p. ◪ ● p.
2	32.5	22.5	97	86	2	8	2.6	≡ a. ●° ◪ d p.
3	31.6	22.2	97	63	3	7	------	☊ ≡ a.
4	32	22.2	97	65	5	7	------	☊° ≡ a. ⊤ ◟ p.
5	31.6	23.2	97	65	3	4	------	☊ ≡ a. ⊤ d ◟ p.
6	32	22.8	98	69	4	7	4.8	● a. p. ⊤ ◟ p.
7	34	23	97	73	3	8	3.8	☊ ≡ a. ◯ ⊤ d ●
8	32.1	23.5	97	67	10	8	.5	●° a. p. ◯ ◪ p.
9	33.7	23.5	98	60	3	5	------	≡ a. ⊤ d ◟ p.
10	33.5	23	97	58	3	8	------	☊° ≡° a. ◟ p.
11	29.9	23.4	95	76	7	9	------	☊ ≡° a. ◟ p.
12	32.4	23.4	92	65	7	6	------	☊° ◯ a. ◪ d p.
13	33	22.8	98	61	3	5	------	☊° ◯ a. ◯² ⊤ ◟ p.
14	33.5	23	97	65	8	7	37.3	●° a. p. ◡ ◟ p.
15	32.5	23.7	97	66	10	7	29.4	⊤ a. ●² a. p.
16	32.4	23	98	63	6	3	------	☊° ≡ a.
17	31.7	22.9	97	68	3	4	------	☊ ≡ a ◡ ◟ p.
18	32	23.2	98	72	1	2	------	☊ ≡ a. ◡ p.
19	32	22.8	98	65	3	5	5.1	◯ a. ◡° ◟ ● p.
20	29	23.6	97	76	5	10	19.3	≡ a. ●° a. p. ◡ p.
21	30.9	23.2	98	82	10	8	3.8	● ≡ a. ●° ◠ p.
22	31.5	23	97	68	9	6	10.5	● a. p. ◪ ◡ p.
23	30.5	23.4	98	68	10	8	11.4	⊕ a. ◯ ◟ ●° p.
24	31.4	23	98	84	9	7	3.1	●° a. p. ⊤ ◟ p.
25	31.8	22.2	98	71	2	6	------	☊ ≡ a. ◪ p.
26	32	22.6	97	68	2	4	------	☊ ≡° a. ⊤ ◟ p.
27	32.1	22.1	97	66	3	5	------	☊ ≡ a. ◟ p.
28	34	23.2	97	77	3	8	1.5	☊ a. ⊤ ●° ◠ ◟ p.
29	33.9	22.8	98	68	4	8	12.2	☊ ≡ a. d ● ◟ p.
30	33.8	23.6	97	74	9	8	------	≡ a. ⊤ ◟ p.
31	32.8	22.4	98	59	4	6	------	☊ ≡ a. ⊤ d ◟ p.
Mean	32.2	23	97.2	69.6	5	6.6	------	
Total	------	------	------	------	------	------	149.9	

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	26	96	------	10	9	------	
2	30.8	24.2	98	------	8	9	26.1	
3	30.5	23.8	96	------	6	8	34.5	
4	31.2	24.5	100	------	6	8	10.4	
5	31.8	24.4	98	------	10	7	.8	
6	31	25.4	98	------	9	9	2.1	
7	32.6	26	96	------	9	8	------	
8	31.6	25.6	97	------	9	9	------	
9	33.2	26	98	------	9	9	------	
10	31.8	25.8	98	------	10	9	------	
11	31.8	25	98	------	9	9	------	
12	31.2	24.6	100	------	9	9	------	
13	31.2	26.8	94	------	6	8	------	
14	31.8	26.6	94	------	7	9	------	
15	29.6	25.2	98	------	9	8	.8	
16	31.2	25.4	98	------	8	9	5.1	
17	33.6	24.4	98	------	6	8	------	
18	33.5	25.5	98	------	8	7	------	
19	32.8	25.8	100	------	7	8	------	
20	32.8	25.6	98	------	7	10	1.8	
21	31.4	25.2	98	------	9	9	------	
22	31.4	25.4	98	------	8	7	.8	
23	31	25.2	95	------	10	9	.3	
24	33	24.5	98	------	8	9	------	
25	32.4	24.6	98	------	8	9	6.4	
26	32.5	24.8	98	------	8	9	.5	
27	33	25.2	98	------	7	9	.3	
28	32.2	25.4	98	------	10	9	8.2	
29	31	25.8	98	------	9	8	------	
30	32.6	26.2	98	------	10	7	------	
31	31.6	25.6	97	------	9	10	.3	
Mean	31.9	25.3	97.6	------	8.3	8.5	------	
Total	------	------	------	------	------	------	98.4	

GUBAT.

[ϕ=12° 55′ N; λ=124° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	24	97	------	7	5	------	☊ a.
2	34	25	89	------	7	5	0.8	● p.
3	33.4	25.4	98	------	6	5	------	
4	34	22	98	------	8	8	------	⊤ d p.
5	34.8	21	90	------	8	4	------	
6	34.2	24	90	------	7	4	------	
7	33.6	25	87	------	6	5	------	◪ p.
8	34.7	22	90	------	8	6	------	
9	34.8	25	95	------	7	5	------	◯ p.
10	35	24.2	98	------	8	5	------	
11	33.8	23.3	87	------	6	8	.3	◪ p p.
12	35	24.1	87	------	7	5	------	◯ a.
13	34.4	23	86	------	6	5	------	⊤ p.
14	33	24.2	89	------	6	5	------	
15	33	23.1	88	------	7	5	.8	
16	31 6	22	88	------	7	6	------	d p.
17	35.1	24.2	98	------	6	5	------	
18	34.3	23.1	98	------	4	3	------	
19	33.6	23.8	89	------	6	5	------	
20	31	22	92	------	6	10	5.3	● p.
21	31	21.8	95	------	7	8	------	d a. p.
22	30	19	85	------	7	6	1.8	
23	29.2	20	91	------	9	8	------	p² a. d a.p.
24	30.9	20.6	93	------	7	5	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	22	90	------	7	5	------	
30	33.4	24	78	------	7	7	------	
31	32	24	87	------	8	7	------	
Mean	33.2	23	90.9	------	6.9	5.7	------	
Total	------	------	------	------	------	------	91[1]	

SUMAY, GUAM (LADRONES ISLANDS.)

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	25.4	90	75	2	3	------	
2	30.2	24.8	87	74	1	10	------	
3	30.2	25.2	86	74	2	8	3	
4	30.6	25.2	89	73	7	5	8.9	
5	29	24	92	93	10	10	11.4	
6	29	23.8	87	75	10	10	5.1	
7	30.2	24.6	89	71	2	3	3.3	
8	30	25	86	71	2	4	2.5	
9	31	26.8	85	71	5	9	------	
10	30.8	24.6	89	71	6	10	5.1	
11	27.2	22	93	77	10	10	10.2	
12	30	23.2	86	72	10	8	1.3	
13	30.4	24	89	70	6	8	------	
14	30	24.6	86	71	4	10	------	
15	31.4	23.8	92	72	8	10	------	
16	31.4	24.4	84	71	4	7	------	
17	31	24	84	69	3	5	3.8	
18	28.2	24	92	74	10	10	1.3	
19	31.2	23	89	71	10	10	2.5	
20	31	24	87	71	3	2	1.3	
21	29	24	87	77	3	7	3.8	
22	30.2	25	89	80	10	10	------	
23	30.4	24.8	84	74	8	10	2.5	
24	29	24	84	84	10	10	7.6	
25	27.8	24	95	93	10	10	19	
26	27.6	23.6	93	84	10	10	14.2	
27	29.2	23.6	90	74	10	10	8.9	
28	30.4	23.6	87	66	10	8	7.6	
29	30.2	23.8	97	71	10	10	3.8	
30	28	24	92	81	10	10	7.9	
31	28.4	24.8	87	92	10	10	16.5	
Mean	29.8	24.2	88.6	75.5	7	8.3	------	
Total	------	------	------	------	------	------	151.5	

[1] 27 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	23.2	92	79	10	10	1.8	⊤ p p.
2	30.3	22.4	94	74	10	10	------	
3	32.6	23.1	95	71	8	10	16.5	⊤ ● p.
4	32.2	22.2	92	66	4	6	------	⊤ ☇ p.
5	32	23	93	67	10	10	------	⊤ d° a. ☈ p.
6	31.9	22.6	91	64	9	9	------	⊤ ◠° ☇ p.
7	31.6	23	93	72	10	9	------	⊤ p.
8	32.6	23.4	93	68	10	8	------	
9	32.7	22.6	93	67	9	10	------	⊤ p.
10	32.5	23.1	92	64	10	7	------	⊤ p p.
11	32.7	23	96	65	10	10	------	
12	34	24.6	92	62	10	8	------	
13	33.1	22.5	85	66	6	4	------	
14	33	22.6	91	67	5	8	------	☋ p.
15	31	23	91	78	10	10	------	
16	33	22.5	97	61	3	8	------	
17	33	23	91	61	7	4	------	☈ ◠° p.
18	33.6	22.9	87	60	2	4	------	☇ p.
19	34.4	23.5	95	58	6	5	------	
20	33.7	23.6	96	58	8	9	------	☈ p p.
21	32.1	23.7	91	81	10	10	13.2	● a.
22	31.9	22.9	96	67	10	10	------	
23	32.4	23.6	91	71	10	10	------	☈ p.
24	31.2	23.5	85	79	10	10	2.8	◠° p a. p ☈ p.
25	31.4	22.6	93	78	10	10	2	p d ☈ p.
26	32.6	22.1	90	65	8	5	------	
27	31.6	22.5	88	71	8	10	------	
28	31.6	22.3	94	72	10	10	------	
29	34.5	22.6	90	61	10	10	------	
30	33.5	23.7	92	62	10	8	------	p a.
31	33.1	23.4	89	71	10	10	------	p a. p.
Mean	32.5	23	91.9	67.9	8.5	8.5	------	
Total	------	------	------	------	------	------	36.3	

VIRAC.

[ϕ=13° 35 N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34	23.9	94	------	7	8	------	⊤ ☇ p.
2	34	23	96	------	4	6	34.5	●² ☈ p.
3	31.5	23	96	------	3	6	------	d° ☇ p.
4	33	23.4	97	76	5	4	------	☋ ◠° a. ☈ p.
5	32.7	23.5	96	72	6	7	------	⊤ ☇ p.
6	33.5	23.5	96	64	7	6	.5	☋ a. ⊤ ☇ ●° p.
7	33.5	23	94	67	7	8	------	d° ☈ p.
8	32.3	24.3	94	68	9	8	------	☇ p.
9	33	24.5	93	59	9	9	------	☈ ☋ ☋ p.
10	33	24	91	60	10	8	------	☇ p.
11	33.5	23	93	57	7	7	------	☇ p.
12	33.4	24	92	58	6	5	------	⊤ ☇ p.
13	34.5	23.5	92	54	4	7	------	☇ ☋ ☋ p.
14	34.5	24	92	67	6	8	------	☇ p.
15	31.5	23.4	92	78	9	9	24.4	● ☈ a.
16	33.5	23.5	96	65	4	6	32	☋ a. ● p.
17	32	24.5	96	72	9	4	------	● ◠° a. ☇ p.
18	33.5	24	93	67	6	5	------	
19	31.9	23.4	96	71	4	7	------	☋² a.
20	32.5	23	95	78	6	10	18.3	☋ a. ● ☈ p.
21	31.7	24	93	72	9	7	.5	●° a.
22	32.5	25	78	71	6	4	------	☋ a. ☇ p.
23	28.8	23	93	77	9	10	20.1	● a.
24	32.8	22.5	96	74	7	8	2.5	◠ a. ☇ ●° p.
25	31.7	23.8	96	69	7	5	3.8	d a. ●° ☈ p.
26	31.9	23	96	73	4	7	------	⊤ ⊕ ○ ☇ p.
27	32.4	23.5	96	68	7	6	------	☋² a.
28	33	24	97	63	8	7	------	☋ a. ☇ p.
29	33.4	23.4	95	63	9	8	------	☋ a. ☇ p.
30	34	23.5	96	61	8	9	------	☇ p.
31	33.4	24	88	93	9	10	17.8	● ⊤² ☇ p.
Mean	32.8	23.6	93.8	68.5	6.8	7.1	------	
Total	------	------	------	------	------	------	154.4	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.9	22.2	97	63	8	9	38.2	● ☇ p.
2	33.3	21.5	99	61	8	7	4.7	● p.
3	33.3	22.5	97	62	6	7	------	
4	33	23	98	61	7	7	------	d p.
5	34.7	23	95	75	7	8	------	
6	33.7	22.7	98	62	7	8	2.5	●° a.
7	33.6	23.6	97	63	8	8	------	◠ a.
8	32.6	22.7	90	65	9	9	17.8	⊤° a.
9	33	23.3	97	67	9	8	------	● a.
10	32.2	23.7	90	61	9	8	------	d a.
11	33.3	24	93	59	8	9	3.2	
12	33.6	24.3	------	63	8	8	------	● a.
13	34.1	23.8	97	59	4	8	------	
14	32.8	23.9	95	67	6	9	------	
15	32.8	23	95	71	9	9	------	
16	33.8	------	97	------	5	8	------	
17	34.9	22	97	55	4	8	16.5	● p.
18	35	21.9	99	55	10	7	6.4	≡° a. ☈ ● p.
19	34.4	20.7	98	65	3	8	------	
20	34.1	21	95	65	8	9	10.2	⊤ ● p.
21	33	22.6	98	89	10	10	29.6	● p.
22	33.5	22.5	98	74	8	8	1.5	≡° a. ● p.
23	29.5	22.2	99	79	9	9	------	≡° a.
24	32.4	22.2	98	61	9	8	------	
25	33.6	22	98	75	9	9	.5	≡° a.
26	35	21.7	98	59	7	9	------	
27	32.4	21.6	98	66	8	9	------	
28	33.8	22.2	97	61	9	8	------	
29	33	23.3	97	65	9	8	------	
30	33.3	23.2	97	65	8	8	24.6	● p.
31	31.5	22.6	92	69	9	9	10	● a.
Mean	33.4	22.6	96.5	65.4	7.7	8.3	------	
Total	------	------	------	------	------	------	165.7	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.8	23.3	94	60	7	6	5.7	☈ ● ☇° p.
2	30.6	23	97	68	8	7	.6	d a.
3	33.6	22.6	96	65	3	7	.7	☋° a. p ☈° p.
4	32.7	23.4	95	68	3	3	2.2	☋° a. ● ☇ p.
5	31.7	23.6	97	76	4	8	52.8	d ●² ☈² p.
6	33	23	99	69	4	5	------	d a. ⊕ ☇ p.
7	33.6	23.7	97	68	4	6	.5	☋ a. ⊕ ☇ ●° p.
8	32.8	24.1	97	64	8	6	------	d a. ○² ☄° p.
9	33.3	24	96	66	3	7	------	☋ a. ☄° ☇° p.
10	33.6	23.5	94	67	4	8	------	☋° a. ○² ☄° d° p.
11	32.7	22.6	94	68	5	7	------	☋° ☇ p.
12	33.8	24.3	92	59	5	4	------	
13	33.6	23.3	97	69	2	4	------	☋ a. ☄° ☇° p.
14	33.7	23.4	96	64	2	7	------	☋ a. ☄° p.
15	31.5	23.6	96	76	5	9	.4	☋° a. d p° p.
16	33.4	22.8	97	64	3	4	------	
17	34	23.8	97	66	3	4	------	☋ a. ☈ ☋° d° ☋ ☇
18	34.2	22.9	96	61	2	3	------	☋ a. ∞ ☇ p.
19	32.4	23.4	97	78	2	8	2.5	☋° a. ☈ ☋ p ☇° p.
20	34.3	23.5	96	59	2	5	.3	☋ a. ⊤ ☇° d p.
21	29.3	24.3	96	85	4	10	10.1	d° ● a. ⊕ ●° ☇° p.
22	32	23.6	97	72	9	8	------	☇ p.
23	32.2	23.1	97	91	5	10	31.4	☋ a. ☈ ●² p.
24	30.7	23	99	77	10	8	35.1	⊤ a. ●² a. p. ☇ p.
25	31.5	22.1	97	82	5	7	------	☈ ☋° ⊕ p.
26	32.9	22.9	97	65	2	4	------	☋ a. ☇° p.
27	33.2	23.5	97	70	2	7	------	☋° a.
28	32.7	23.3	97	68	6	8	4.6	☋ a. ☇° d p p.
29	32	24.9	94	69	7	8	11.4	◠° ● a. ☄° d ☇ p.
30	30.8	23.9	98	74	9	7	10.1	● a. p. ☄° p.
31	32	23.5	88	72	7	7	------	● a. ☄° p.
Mean	32.6	23.4	96	69.7	4.7	6.5	------	
Total	------	------	------	------	------	------	168.4	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	21	98	61	10	8	2.8	●° a.
2	31.9	21.2	97	59	8	7	3.6	☊ ≡ ●° a.
3	31.7	20.1	98	59	5	8	1.5	☊ ≡ a. ⊤° ◠ ●° p.
4	31.9	20.5	98	59	10	9	4.8	≡ a. ⊤² ●° p.
5	30.6	19.7	98	64	7	9	------	≡ a. ◪° p p.
6	30.8	19.8	98	63	5	8	11.4	≡ ⊤° a. ● p.
7	31.1	20	97	62	3	6	------	☊ ≡ a. p° p.
8	31.1	20	98	62	2	2	------	
9	31.5	20.1	97	62	7	8	4.3	● ⊤° p.
10	30.4	19.8	98	65	9	8	------	≡ a. d ◠ p.
11	29.2	19.7	97	69	3	8	------	≡ a. p° p.
12	30.3	19.9	97	64	2	6	------	≡ a. p p.
13	30.5	19.9	98	63	7	2	------	≡ a.
14	30	20.1	98	64	4	8	------	☊ ≡ a.
15	30.2	19.8	97	64	5	8	11.7	●² a.
16	30.5	21	97	62	5	8	14.5	☊ ≡ a. ●° a. p.
17	30.9	20.6	97	63	7	9	22.4	≡ d a. ●² ⊤° p.
18	30	19.8	98	65	2	8	28.9	≡ a. ●² p.
19	29.8	20.3	98	68	10	9	------	≡ a. p° p.
20	31	20.4	98	61	3	8	------	≡ a. ⊤° p.
21	31.3	19.5	98	63	7	10	44.7	≡ ●² a. ●° p.
22	30.1	20	97	64	9	6	2.3	d a. ⊤° p.
23	29.8	19.9	98	70	7	9	43.9	≡ a. ●° p.
24	29.3	20.1	97	69	10	10	51.3	●° a.
25	29.9	19.6	97	70	6	8	14	●° a. p.
26	29.1	19.8	98	70	7	8	28.2	●² ⊤² p.
27	30.3	21	98	64	9	7	32	●² p.
28	30	21	98	63	5	7	------	⊤ p.
29	31.6	21	97	61	3	8	11.7	d p.
30	31	19.3	98	63	10	10	48	●² a. ●° p.
31	29.5	20.8	98	64	7	2	------	≡ a.
Mean	30.5	20.2	97.6	63.9	6.3	7.5	------	
Total	------	------	------	------	------	------	382	

SANTA CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.4	22.5	97	70	8	9	0.2	≡ a. ● ○° ⊤ d p.
2	32.8	22.6	97	65	6	8	6.1	☊ a. ◪ ● p.
3	33.3	21.7	96	81	8	9	9.7	⊤° ● a. ● ◪ p.
4	32.8	22.2	96	56	2	4	19.3	∞ a. ● ◪ p.
5	34.7	22.4	96	75	3	7	2.1	≡ °d ⊤ a. ●° ◪ p.
6	34.3	22.3	99	64	5	7	------	≡ ² ◪ ° a. ⊤ ◟ p.
7	34.4	23.8	97	79	8	9	2.5	☊ ≡ a. ⊤ ◟ p p.
8	34.7	23.1	95	75	8	9	4.3	☊ ° ≡ ° a. ● ○ ⊤ p.
9	34	22.6	97	75	8	9	.3	≡ ● ° ○ ° a. d ⊤ p.
10	34.3	22.6	95	75	8	9	------	☊ ≡ ° a. ◟ p ⊎ p.
11	34.4	22	97	69	9	9	3.6	☊ ² a. ⊤ p ⊎ ◟ ° p.
12	36.6	23	91	58	8	9	1	● ◠ ° a. ⊎ ⊤ ● ° p.
13	34.2	22.4	96	74	2	9	.5	● ° d ⊤ ° ◡ ⊎ p.
14	33.4	23.1	97	88	3	9	------	≡ a. ◪ d p.
15	34.5	22.5	98	95	6	9	16.6	d ◪ ● ⊎ p.
16	34.6	22	95	74	2	8	------	≡ ° a. ◪ p.
17	34.2	22.4	97	65	7	9	3.8	☊ ≡ a. ⊤ ° ◟ ● ° p.
18	34.8	22.7	97	60	1	4	2	≡ ◠ ° a. ◪ ◪ p.
19	34.9	21.9	94	68	3	4	1.3	● ° d ⊤ ° ◡ ⊎ p.
20	35.2	21.8	92	44	8	8	------	○ ° ◟ ⊎ ◡ p.
21	35.2	23.2	97	96	8	10	39.1	⊤ ●² a. ⊤ ● ⊎ ◟
22	30.8?	22.4	98	81?	9	8	3.6	● ◠ a. ○ ◟ p.
23	32.5	22.4	97	92	9	9	10.7	⊤ °da. ● ° ⊤ ◟ ○ °
24	31.9	22.6	97	76	9	9	19.1	● a. p. ◟ ⊤ p.
25	28.5	21.5	98	75	8	9	------	⊤ d ◟ ◡ ⊎ p.
26	33.7	21.5	97	66	2	7	------	☊ ⊤ a. ⊤ ° ◟ p.
27	33.9	22.1	97	64	8	8	------	☊ ≡ a. ◟ p.
28	33.7	22.2	97	66	7	9	------	☊ ² ≡ a. ○ ² p.
29	33.3	24	93	65	10	9	4.1	☊ a. ● ° a. p. ⊤ ° p.
30	32.8	23.1	97	68	10	8	9.5	● ° a. ● ⊤ ° ⌿ ° ◟ p
31	32.3	23.1	97	89	8	9	------	≡ a. ⊤ ° a. p.
Mean	33.7	22.5	96.3	72.5	6.5	8.2	------	
Total	------	------	------	------	------	------	159.4	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	22.3	95	78	6	7	------	⊕ p.
2	30.3	21.8	92	92	8	9	25.9	☊ ° p ° a. ● ⊤ p.
3	30.6	22.7	97	70	6	7	2.3	d ≡ a. ⊤ ◠ ² ●° p.
4	32	22.4	96	67	6	3	18.3	≡ ° ☊ ° a. ◪ ● p.
5	32.8	22.4	97	63	2	7	27.8	☊ ≡ a. ◪ ●² p.
6	31.5	23.4	97	69	8	7	1.4	◠ d a. ◪ d² p.
7	31	22.8	97	78	6	8	.6	☊ ≡ d° a. d p.
8	30.7	22.5	95	74	9	8	10.9	☊ a. ⊕ ⊤ ◟ p.
9	29.2	22.5	96	85	10	9	11.4	● ⊤ a. ⊕ d p.
10	29.7	21.7	97	79	5	9	4	≡ a. ●° p p.
11	31.3	22.9	97	71	8	5	9.1	☊ a. ⊤ ◟ ● p.
12	30.4	22.3	97	95	7	9	13.3	≡ a. ●° ◟ ⊤ p.
13	29.8	22.4	97	78	8	6	9.9	⊤ ● a. ◟ ◡ p.
14	30.7	22.8	97	79	8	7	2.8	☊ ² ≡ ●° a. d° p.
15	31.2	22.2	95	85	8	9	21.1	☊ ≡ ° a. ● ⊤ p.
16	31.8	22.8	97	65	7	5	------	☊ ° ≡ ◠ a.
17	32.4	23.4	97	76	7	9	28.4	☊ ² ≡ a. ●² ◪ p.
18	33.9	22.8	96	55	1	2	------	☊ ° ≡ ° a. ⊤ ◟ p.
19	33.3	22.8	94	69	2	6	8.6	☊ ° a. ◪ ● p.
20	33.5	22.4	95	66	7	7	------	☊ ° ≡ ° a. ◪ p.
21	27.6	22.5	89	96	7	10	12.1	● d² ≡ p.
22	31.4	22.2	92	74	8	9	------	◠ a.
23	31.2	22.1	95	92	7	9	42.4	⊤ a. p. ◟ ² ●² p.
24	25.2	21.2	97	97	10	10	36.7	d a. ● a. p.
25	32	21	92	63	6	7	5.6	●° ◪ p.
26	32.4	22.5	98	64	3	5	------	◟ p.
27	31.8	22.9	95	66	7	8	------	☊ ² a. ○ p.
28	31.1	22.4	94	74	5	8	------	☊ ² a.
29	30.2	22.7	96	72	8	9	6.6	◠ ² a.
30	25.6	21.4	96	97	10	9	40.4	● ° a. ●² ⊤ p.
31	30.9	21.4	97	86	8	9	19.6	●² ◠ ² a. ⊤ p p.
Mean	30.8	22.4	95.5	76.6	6.7	7.5	------	
Total	------	------	------	------	------	------	359.2	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.9	22.1	97	72	10	10	7.5	● a. p. ◪ ○ p.
2	28.9	22.8	95	84	10	10	24.2	d ● a.
3	31.2	22.4	94	73	9	10	3.6	d ◟ ● p.
4	31	22.3	97	75	9	8	1.8	◠ a. ● ° ◟ p.
5	31.7	23.2	91	81	9	9	15.1	● ◪ ° p.
6	31.7	23	97	81	8	9	1.2	d ◪ a. ● p.
7	32.5	23.2	96	85	7	10	46.1	d° ◪ ° ●² p.
8	31.4	22.3	96	76	10	8	20.6	○² a. ● p.
9	31.7	22.8	97	72	8	9	48.2	◠ a. d° a. p. ●² p.
10	30	22.7	93	91	10	10	56.6	● ⊤ a. p. ◟ p.
11	30.8	23	90	85	10	10	61	⊤ d ○ ° a. ◪ ● ²
12	30.1	22.2	95	95	10	10	49.9	●° a. ⊤ a. p. ●² p.
13	31	22.9	98	85	10	10	33.8	◪ ● ² a. ◟ ●° p.
14	31.3	22.9	94	74	10	10	.5	◠ a. d a. p. ⊎ p.
15	30.7	22.3	95	86	4	9	2.9	d ● p.
16	31.8	22.2	94	73	8	7	3.8	d ● ⊤ p.
17	31.7	24.1	98	72	4	8	.5	◪ ° ●° p.
18	32.1	24.2	95	70	8	6	------	◪ ◠ p.
19	32.6	24	95	74	7	9	------	≡ ° a. d ⊤ ◠ ◟ p.
20	32.6	23.2	97	64	10	10	1	○° a. d ◪ p.
21	32.4	22.8	94	69	10	10	16	◪ ² ●² ⊎ ² p.
22	30.7	23.3	86	75	10	10	------	○° a. p. ◟ p.
23	31.8	21.8	95	72	10	9	1.4	○ a. ◪ p.
24	30.4	23.2	96	94	10	10	74.6	● ⊤ a. ●² ◪ p.
25	31.5	22.9	86	61	9	6	------	⊤ ◟ p.
26	31.4	22.8	92	73	8	8	------	◠ d a. ◟ p.
27	31.8	22	97	69	10	9	1.5	d a. ○° p.
28	30	23.1	96	82	10	10	98.3	⊤ ● a. ●² ◪ p.
29	29.6	22.3	97	74	10	10	54.2	● a. p. ⊤ p.
30	28	22.5	97	93	10	10	80.9	● a. ●² ⊤ p.
31	30.1	22	97	83	10	10	59.9	⊤ a. ● a. p.
Mean	31	22.8	94.7	77.8	9	9.2	------	
Total	------	------	------	------	------	------	765.1	

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.8	23.5	95	79	10	10	1.8	d a. p.
2	33.4	23.4	96	92	8	10	28.2	☊ a. ● ⊤ p.
3	33	23	98	78	10	9	1.8	☊ ≡a. ● d p.
4	34.2	23.3	97	70	10	9	------	☊ ≡a. ☾ ⊤ p.
5	34.3	22.9	96	63	4	8	------	☊ a.
6	34.1	24.3	95	60	9	9	------	☊ a. d° ⊤ ☾ p.
7	34.8	23.6	97	93	9	10	17.7	☊ a. ● ⊤ ☾ p.
8	34	23.6	97	54	8	9	11.7	☊ a. ● p.
9	33.8	22.5	96	70	8	9	.5	☊ ●° a. ⊤ d°p.
10	33	23	97	70	4	10	.3	☊ a. d° ⊤ p.
11	33	23.4	97	76	9	10	3	☊ a. d a p. ☋ p.
12	31.6	23	97	68	9	10	45.4	☊ a. ● ☐☌ p.
13	33.5	23.5	97	68	8	10	1.3	☊ a. d ☋ p.
14	32.8	22.9	96	76	2	10	28.9	☊ a. ● a. p.
15	33.6	22.8	97	71	5	4	------	☊ a. ☋ p.
16	34.6	24.3	94	56	5	3	------	☊ a.
17	34.6	25.1	95	66	4	4	2	☊ a. ● p.
18	35.5	23.6	96	59	3	3	------	☊ a. d° ☐ p.
19	36.6	24.3	97	55	10	5	------	☊ a. ● ☐☌ ☐ p.
20	35.9	23.6	96	55	6	7	8.9	● ☐☌ ☐ p.
21	34.7	23.7	96	67	8	8	1.3	☊ a. ● ☐ p.
22	34.4	23	97	53	7	5	------	☊ a.
23	35.4	22.8	96	58	3	4	2	☊ a. ☐☌ ● p.
24	35.5	24.5	95	90	10	10	13	d a. p. ● ☋ p.
25	34.2	22.4	97	58	8	4	------	☊ a. ☐☌ d p.
26	33.1	23.3	97	90	7	10	21.6	☊ a. ● ☐☌ p.
27	33.6	21.6	96	64	8	9	20.6	☊ a. ● ☐☌ p.
28	33.7	23.8	95	51	8	7	8.4	☊ a. ● p.
29	31.3	22.5	97	69	10	10	27.4	☐ d a. ● p.
30	32.1	23	95	83	9	10	7.4	☊ a. ●a. p.
31	32.3	23	97	76	10	9	3.1	☊ a. d° a. p. ● p.
Mean	33.9	23.3	96.3	69	7.4	7.9	------	
Total	------	------	------	------	------	------	256.3	

BALER.

[ϕ=15° 40′ N; λ=121° 34′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	24.9	74	67	10	10	------	
2	------	23.1	89	73	10	10	------	p ⊤ p.
3	------	23.5	84	56	10	10	------	
4	------	23.8	91	66	10	7	------	☾ p.
5	------	23.6	92	91	10	10	------	d° p.
6	------	24	91	70	10	10	4.1	☾ ● p.
7	------	24	89	55	10	10	------	☾ p.
8	------	25.1	80	54	10	10	------	
9	------	25.5	75	55	10	10	------	☾ p.
10	------	25.1	80	57	10	4	------	☾ p.
11	------	24.6	86	53	10	7	------	
12	------	25.4	76	53	10	10	------	☾ p.
13	------	26	76	53	3	3	------	⊤ p.
14	------	26	77	53	3	3	------	⊕ a. ⊤ ☋ p.
15	------	25.2	83	52	3	9	------	⊕ ☾ p.
16	------	25	92	64	10	8	------	d° a. ☾ ☋ p.
17	------	24.4	84	66	3	5	------	
18	------	24.5	92	56	10	3	------	☾ ⊤ p.
19	------	25	85	63	10	2	------	⊤ ☾ p.
20	------	23.4	90	64	10	10	.3	☾ ● p.
21	------	23.6	91	84	10	10	6.9	● p.
22	------	23	90	66	9	10	------	☾ ☋ p.
23	------	22 6	91	67	10	10	1.8	☐☌ ● p.
24	------	23.4	91	85	10	10	134.6	● a. ☐☌ ●² p.
25	------	23	87	72	10	10	------	
26	------	22.6	86	61	10	6	------	⊕ a. ☐☌ p.
27	------	21.5	83	61	10	10	------	☾ p.
28	------	26.1	77	62	10	10	------	
29	------	25.2	77	71	10	10	------	☐ a.
30	------	25.2	85	69	10	10	------	d° p.
31	------	25.4	80	78	10	10	.5	● ☾ p.
Mean	------	24.4	84.6	64.4	9.1	8.3	------	
Total	------	------	------	------	------	------	148.2	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	24.1	83	59	10	5	------	d° p.
2	30.7	24.6	87	74	4	10	------	d° p.
3	33.5	21.8	85	59	1	1	------	d° ☐² p.
4	34.4	23.9	87	61	3	2	------	d° ☐☌² p.
5	33.9	23.6	96	60	2	6	49.5	☐☌² ●² p.
6	32.5	24	94	74	1	10	2.3	☐☌² ●° p.
7	32.6	24	92	85	3	8	4	●° p.
8	32.4	22.4	89	84	2	8	3	●° p.
9	30.8	23	82	79	5	10	25.7	●² p.
10	31.2	23.2	91	78	2	9	27.7	d° a. ●² p.
11	31.5	23.8	90	92	5	10	3	●° p.
12	29.9	23.9	88	79	7	7	------	d° p.
13	32.6	25	87	79	5	5	------	d° p.
14	33	24	88	66	2	2	------	d° ☐☌° p.
15	33	24.2	89	68	6	6	33	☐☌² ●² p.
16	32	24.5	97	65	3	2	49.8	●² p.
17	31.4	24.1	94	76	9	7	.5	d² p.
18	31.4	24	92	77	9	6	------	☐² p.
19	32	23.7	93	68	2	3	------	d° ⊤° p.
20	32.4	23.7	95	69	2	3	------	
21	33.7	23.6	93	65	2	6	2	●° p.
22	32.6	23.5	91	67	3	3	------	d° ☐☌² p.
23	31.8	23.4	94	72	4	6	------	
24	30.2	24	94	80	10	10	------	d° p.
25	32	23.4	93	85	2	8	------	
26	32.5	22.5	93	67	2	5	25.4	
27	30.7	22.4	97	70	10	10	61.4	●² a. p. ☐☌² p.
28	28	23	95	86	10	10	26.2	●² d° p.
29	29.5	22.9	90	80	10	10	22.9	●² p.
30	28.9	23	90	83	10	10	12.7	d° ●² p.
31	31	23.9	93	76	10	10	27.7	●² ☾° p.
Mean	31.8	23.6	91	73.6	5	6.7	------	
Total	------	------	------	------	------	------	376.8	

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.4	22	98	60	10	8	3	☽° ⊤° a. ☽° ☐☌°
2	31.5	21.9	99	64	10	9	3.6	≡² ⊤° a. ☐☌° ●p.
3	34.3	23.1	97	57	7	2	15.2	☽²a. ☐☌ ☐° ●p.
4	35.4	23.3	98	60	4	3	------	☐☌ d° p.
5	36.5	22.9	97	57	4	5	------	☊² a. ☐☌ ☐° p.
6	35.1	25.1	93	60	10	8	20:8	☽°a. p. ☐☌ ☋° ●²
7	34.9	22.2	99	58	6	4	.5	⊤° a. ☐☌ d° p.
8	34.8	21.9	97	54	8	5	.8	⊤° a. ☐☌ d² p.
9	36	22.4	99	57	4	8	4.6	☽° a. ☐☌ ☽² d² p.
10	35	21.9	98	57	7	6	.3	☽° ⊤ a. ☽° ☐☌ d°
11	34.8	22.8	97	57	10	5	1.5	☽² a. ☐☌ d² p.
12	35.5	22	99	55	4	4	17.3	☽² a. ☐☌ ●² p.
13	38.5	22.2	100	57	10	3	.3	≡² ⊤° a. ☐☌ ☽° d°
14	35	22.3	98	56	2	2	------	☐☌ d° p.
15	37.7	22.8	97	61	2	7	------	☊² a. ☐☌ ☽° ☋² p.
16	37	24.1	97	62	8	7	------	☐☌ p.
17	35.4	25	94	55	10	3	------	☐☌ ☋² p.
18	36	23.1	97	56	2	3	3.8	☊² a. ☐☌² d² p.
19	33.6	22 6	98	59	4	8	------	⊤° a. ☐☌² ☋° p.
20	34.6	22.7	97	58	7	8	------	☽°a. p. ☐☌ ☽° ☋°
21	34.1	22.5	98	57	7	10	------	☊² a. ☐☌ a. p. ☽°
22	36.5	23.1	98	55	2	4	------	☊° a. ☐☌ p.
23	32.7	23.2	95	62	10	10	25.4	☽°a. p. ☐☌ ☋° ●²
24	30.7	22.8	98	85	10	10	9,2	●° a. d² ☾ p.
25	32.5	22.8	97	64	9	8	4.8	⊕° a. ☐☌ ●° p.
26	33.5	22.1	100	66	9	7	.8	≡² a. ☽° ☐☌ p.
27	31.6	22.3	100	71	10	10	.3	☽° a. ☽² ☾° p.
28	32	24	96	68	10	10	.3	d° ☽² a. p.
29	33.2	23.7	97	64	10	10	------	☽ ☽° a. ⊕² a. p.
30	33.5	22.7	97	65	9	10	.6	⊕² a. ☐☌ d² p.
31	34.7	23.7	97	57	8	9	1	☐☌ d² p.
Mean	34.5	22.9	97.5	60.5	7.2	6.6	------	
Total	------	------	------	------	------	------	114.1	

METEOROLOGICAL DATA, ETC.—Continued.

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	25.5	79	60	10	9	------	☾ p.
2	30.7	25	88	72	9	10	6.1	☊ a. ● ◠ p.
3	31.2	24	86	65	1	3	4.6	● p.
4	31	25.5	81	65	8	8	34.8	● ☐☌° p.
5	31.1	24.9	84	72	4	6	5.8	● ☐☌° p.
6	30.5	25	88	72	7	9	14.7	☐☌° ● p.
7	30.4	25	84	73	8	8	1	d a. p p.
8	30.6	24.4	87	80	7	10	8.6	● p.
9	30.3	24.6	80	72	7	10	6.4	d a. ● p.
10	30.6	24.6	85	65	7	8	32.5	d ● ☐☌° p.
11	30.4	24.6	87	69	9	10	4.6	● p.
12	30	24.7	88	73	8	7	1.3	d ● a. ☋° p.
13	31.4	25.4	83	68	3	8	------	☊ a. ☿°d ☾ ♅°p.
14	31.6	25.4	84	68	2	2	5.1	☊ a. d p ☐☌° p.
15	31.2	25.1	82	69	3	8	10.7	☿° d p.
16	31	26	80	74	9	6	------	● a. ☿° d p.
17	31.2	26	86	72	9	6	------	☊² a. ☿° d° ◠° p.
18	30.8	26.1	82	72	6	5	------	d a. ☿° ◠² ♅ ☾ p.
19	31.6	25	84	68	1	6	------	☊² a. ☐☌° d p.
20	31.6	25	84	66	4	5	------	☊ a. ☿° ☾ p.
21	31.8	26	85	68	4	7	------	☊² a. d° ☾ p.
22	32	25.9	84	68	4	9	17	☊² a. d ☐☌° ● p.
23	30.7	24.4	88	68	9	9	9.1	● ☐☌° p.
24	29.6	25.2	83	76	10	10	1.3	d ◠° a.
25	30.7	26	86	76	8	9	3.8	p a. ☿° ● ◠° p.
26	31.1	23.4	90	71	8	9	62.2	☿° p.
27	28.2	24.6	88	77	10	10	110.2	● a. ●² ☐☌° p.
28	26.4	24.2	87	89	10	10	47.2	☿° a. ● a. p.
29	27.3	23.7	90	81	10	10	14.4	● a. p.
30	28.2	24	87	78	10	10	22.9	● a. ●² p.
31	30.2	24.5	87	72	9	8	26.2	d a. ☿° ● p.
Mean	30.5	25	84.9	71.6	6.9	7.9	------	
Total	------	------	------	------	------	------	450.5	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6. a m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	23.5	92	66	10	8	------	
2	32.1	23.2	91	67	7	8	16.8	☊ a. ☐☌ ● p.
3	33.4	22.5	96	62	0	4	17.8	☊² a. ☿ ● p.
4	32.8	23.1	93	69	8	7	4.1	☽² a. ☿ ●° p.
5	32.3	24	95	73	8	8	------	☿ d° p.
6	33.4	24.1	------	65	------	6	------	
7	32.4	24.5	88	85	6	10	1.3	☊ a. d² p.
8	32.3	23.5	93	68	6	7	------	☊ a.
9	32.3	24	91	76	9	10	4.1	● p.
10	31.8	24.3	94	70	9	7	17.8	d° a. ● p.
11	31.9	24.1	95	73	2	6	2.3	☊² a. ●° p.
12	32.4	24	97	69	5	6	------	◠² d° a.
13	32.3	24.1	89	69	6	7	------	☊° a.
14	33.1	24.5	93	66	1	4	------	☊° a. ◠ d° p.
15	33.2	23.9	94	69	1	4	------	☊² a. d° p.
16	32.8	24.2	94	74	1	8	.3	☊° a. ☐☌ d p.
17	33	23.8	94	73	1	5	82	☊² a. ●² ☐☌ p.
18	31.8	24.7	98	75	3	6	------	☊ d° a. ☐☌ p.
19	32.8	23.8	97	71	2	6	------	☊² a. ☿ p.
20	33.2	23.9	96	74	1	8	------	☊² a. ☐☌ d° p.
21	33.3	24.9	93	77	1	6	2.5	☊ a. ☐☌ ●° p.
22	32.7	24.4	98	67	1	4	.3	☊² a. d° ☾ p.
23	32.3	23.7	98	75	0	8	4.3	☊² a. ● ☐☌ p.
24	32.7	23.1	92	65	9	10	.8	☊² a. d° p.
25	33.9	23	89	72	8	6	42.7	☿ ● p.
26	31.3	22.9	96	74	8	10	59.9	d² a. ● p.
27	25.7	23.4	96	94	10	10	295.1	●² a. p.
28	24.9	23.1	97	98	10	10	161.5	●² a. p.
29	24.7	22.6	95	96	10	10	100.6	●² a. p.
30	29.6	22.5	97	76	10	10	13.8	d² a. p.
31	30.3	23.8	95	76	10	10	6.1	d a. p.
Mean	31.7	23.7	94.2	73.7	5.4	7.4	------	
Total	------	------	------	------	------	------	834.1	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Tempara-ture. Maximum.	Tempara-ture. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.4	23.1	92	77	10	10	3.8	●° a. ☾² p.
2	31	23.1	------	73	5	7	------	☾² ☊° p.
3	31.9	24.6	93	78	7	8	5.6	☊ ●° a. ● ☾² p.
4	31.4	25.3	92	77	3	7	------	v a. ☊² ☾² p.
5	32.3	24.8	92	72	2	4	------	☊ a. p. ☾° p.
6	31.2	24.9	94	78	8	6	------	☊ a. ☊² p.
7	30.6	25.7	86	84	10	8	7.9	●° a. ☾° p.
8	30.5	26.1	92	89	9	10	.8	●° a. d ☾² p.
9	29.9	24.9	84	94	7	10	7.7	●° a. ● ☾² p.
10	30.4	24.6	84	82	10	9	8.1	d° a. ● ☾² p.
11	30.8	25.5	83	77	8	7	.8	d a. ☾ p.
12	30.2	26.9	86	83	8	10	1.5	● ☾° p.
13	30.3	26.2	90	79	10	7	------	d a.
14	31.1	26.7	88	78	2	7	------	
15	30.8	26.6	89	81	3	8	------	☾° p.
16	31.5	25.4	92	76	3	4	------	v a.
17	31.9	25.8	90	78	5	6	------	☾° p.
18	32	24.8	94	72	4	8	------	v a. ◠ ☊ ☋ p.
19	31.4	25.2	94	75	8	10	------	☋° p.
20	31.9	25.7	95	81	5	10	------	d° a. p. ◯ p.
21	33.7	24.6	93	68	6	2	------	v a. ☊ ☾ p.
22	33.8	27.9	84	65	4	3	.6	●° ☾° p.
23	32.9	25.8	91	70	7	7	9.7	v a. ●° ☾² d p.
24	32.7	24.5	91	66	4	8	8.4	● ☄° ☐☌ p.
25	31.9	24.4	87	82	10	10	60.7	● a. p. ☄° p.
26	27.4	23.7	90	92	10	10	76.7	d a. ● a. p.
27	27.4	23.7	92	97	10	10	259.6	☄° ●² a. p.
28	26.8	23.6	92	96	10	10	209.8	☄ ●² a. p.
29	27.4	23.7	90	86	10	10	19.1	● a. ●° p.
30	30.5	24.6	88	78	10	7	.5	d a. p.
31	30.2	25.2	85	81	7	8	1.5	d a. p. ● p.
Mean	30.8	25.1	89.8	79.5	6.9	7.8	------	
Total	------	------	------	------	------	------	682.8	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	24.6	81	65	9	9	10.7	● p.
2	31.8	23.1	95	65	7	8	.3	●° a.
3	32.6	25.4	89	66	5	7	------	
4	33.4	25.1	85	61	5	4	------	☾ p.
5	33	24.9	85	60	9	8	.3	d a.
6	33.7	24.8	85	62	8	10	------	☾ p.
7	33.8	25.1	86	61	10	6	------	
8	31	26	85	66	10	10	------	☐☌ p.
9	33.1	25.8	80	61	9	9	------	☾ p.
10	31.4	25.1	77	66	10	10	------	☾ p.
11	34	26	80	58	8	7	10.4	☾ p.
12	33.4	25.2	91	64	6	8	------	● a. ☾ p.
13	34	26	80	62	6	6	------	☾ p.
14	33.5	25.4	84	67	8	8	------	☾ p.
15	28.3	24.1	84	85	10	10	3.3	●° a.
16	34.2	24.3	90	60	7	9	------	
17	35.5	23.8	87	73	3	9	------	d ☾ p.
18	32.3	23.7	96	65	4	7	------	d a.
19	34.4	24	93	52	6	4	------	
20	34.2	24	92	59	5	9	5.8	●° ☐☌ p.
21	30	24.4	89	72	10	10	5.6	●° a. p. ☾ p.
22	30.4	23.7	97	70	9	8	29.5	●² a.
23	30.4	24	96	76	10	10	7.8	p a. ● p.
24	32	23.6	96	68	10	7	4.9	d a. ● ☾ p.
25	31.2	23.5	99	72	10	8	------	☾ p.
26	33.5	23.3	96	69	8	6	.5	p ☾ p.
27	34	23.5	97	70	3	10	------	
28	32.5	25.2	87	63	9	10	------	
29	34.4	24.7	84	62	10	10	------	☾ p.
30	33.2	26.4	79	66	10	4	25.7	● p.
31	28	23.1	93	82	10	10	21	●° ☿ a. ● ☾ p.
Mean	32.6	24.6	88.3	66.1	7.9	8.1	------	
Total	------	------	------	------	------	------	125.8	

SEISMOLOGICAL BULLETIN FOR AUGUST, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

8, 6h 42m 1s.* **Southeastern Luzon.**—Earthquake of intensity IV, felt in Camarines, Albay, and Sorsogon Provinces, over an area of about 200 kilometers in diameter. According to the data derived from the records of the seismographs of the Observatory, the epicenter of the disturbance was at a distance of some 300 kilometers from Manila and, hence, may be located in the neighborhood of the western boundary of Albay Province, west-southwest of Mayon Volcano. This location would place it at the eastern extremity of the tectonic line or fault in which originate the Camarines earthquakes. This line appears to coincide with the low and swampy region traversed by the Quinali and Bicol Rivers in the direction ESE-WNW. Though we have no other observations regarding this rather extensive earthquake than those made at stations somewhat distant from the supposed epicenter, we do not believe that it had a greater intensity than IV within the epicentral area. This seems to follow from both the small amplitude and short duration of the movements recorded by the Manila seismographs and the fact that the disturbance has not been registered at any of the nearest observatories on the Chinese coast.

15, 2h 17m. **Sumay** (Guam). Earthquake of intensity III, duration 5 seconds.

27, 4h 40m. **Sumay** (Guam). Earthquake of intensity III.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight=0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
			V.	14 34 12?	----------	----------	----------	-------	------	15 44	
132	2	I_r	H. NNW	14 34 12?	----------	----------	----------	-------	------	15 51	
			H. WSW	14 34 12?	----------	----------	----------	-------	------	15 40	
			V.	6 42 01	----------	6 42 40	6 42 53	0.34	2.4	6 50	Vertical component 0.13 mm. Earthquake, III in the southeastern part of Luzon.
133	8	I_v	H. NNW	6 42 02	----------	6 42 40	6 42 49	.12	4.5	6 51	
134	12	I_d	V.	22 57 33	----------	22 57 50	22 58 21	.48	2.4	23 03	V. C. 0.20 mm.
135	14	I_d	V.	19 08 07	----------	19 08 22	19 08 24	.07	2.4	19 11	V. C. 0.02 mm.
136	16	I_d	V.	2 40 10	----------	2 40 21	2 40 23	.01	2.4	2 42	V. C. 0.01 mm.
			V.	7 04 03	----------	----------	----------	-------	------	7 26	
137	18	I	H. NNW	7 04 07	----------	----------	----------	-------	------	7 27	
			V.	13 48 40	13 53 00	13 56 54	13 57 39	.10	4	14 40	V. C. 0.07 mm.
138	21	II_r	H. NNW	13 48 41	13 52 53	13 56 54	13 57 46	1.03	11.4	14 37	
			H. WSW	13 48 41	13 52 59	13 56 54	13 58 00	1.20	8.7	14 23	
139	22	I_d	V.	1 43 01	----------	1 43 37	1 44 15	.02	2.4	1 46	V. C. 0.01 mm.
140	22	I_d	V.	----------	----------	14 25 22	14 25 24	.03	2.4	14 28	V. C. 0.01 mm.
141	24	I_d	V.	----------	----------	23 33 13	23 33 15	.03	2	23 35	V. C. 0.01 mm.
142	26	I_d	V.	3 57 46	----------	3 58 24	3 58 33	.02	2.4	4 01	V. C. 0.01 mm.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=11.8 seconds; WSW–ENE pendulum, T=8.8 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

8, $6^h\ 42^m\ 1^s$.* **SE de Luzon.** Temblor de tierra de intensidad IV, sentido en las provincias de Camarines, Albay y Sorsogón, comprendiendo un area de cerca de 200 kilómetros de diámetro. Su epicentro, según los datos suministrados por los seismógrafos del Observatorio, se hallaba á unos 300 kilómetros distante de Manila, pudiendo por consiguiente colocarse hacia el límite occidental de la provincia de Albay, al WSW del volcán Mayón. Tal situación corresponde al extremo oriental de la línea tectónica ó de fractura donde se originan los terremotos de Camarines. Esta línea parece coincidir con la región deprimida y pantanosa que recorren los ríos Quinali y Bicol en dirección ESE-WNW. Aunque de este temblor relativamente extenso no poseemos más observaciones que las procedentes de estaciones situadas á alguna distancia alrededor del supuesto epicentro, no creemos sin embargo tuviese en él intensidad superior al grado IV. Así parecen indicarlo tanto la poca amplitud y duración de los movimientos registrados por los seismógrafos de Manila como el hecho de que no fuese registrado en ninguno de los Observatorios más próximos de las costas de China.

15, $2^h\ 17^m$. **Sumay** (Guam, Islas Marianas). Temblor de tierra de intensidad III, duración 5 segundos.

27, $4^h\ 40^m$. **Sumay** (Guam, Islas Marianas). Temblor de tierra de intensidad III.

[1] La intensidad de los terremotos se indica conforme á la conocida escala De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120 E de Greenwich.

THE SEISMIC CENTERS OF SAMAR, LEYTE, AND EASTERN MINDANAO.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

The least stable region of the Philippine Islands is, beyond doubt, represented by the strip of the Archipelago which contains the Islands of Samar and Leyte and the eastern portion of Mindanao. The distribution of the districts which have been shaken most violently by the various earthquakes of which we have any knowledge seems to indicate two seismotectonic lines, whose general directions are nearly parallel. One of these follows the eastern coasts of Mindanao and Samar; the other commences in Davao Gulf and, extending in a northerly and north-northwesterly direction, passes along the valley of the Agusan River, through the eastern part of Butuan Bay and the southwesternmost part of Leyte, thence to the northern coast of Leyte and to Biliran Island, and finally terminates in the neighborhood of Masbate Island. Each of these lines possesses peculiar characteristics as to topographic relief and seismicity, of which we will try to give an idea in these brief notes.

The coastal seismotectonic line.—The cause of the great instability observed on the eastern coasts of Mindanao and Samar became clear when in January and February, 1907, there was discovered a submarine trough of extreme depth adjacent to them. This discovery was made by the German gunboat *Planet,* then engaged in a voyage of hydrographic exploration around the world, the results of which have been published in the "Annalen der Hydrographie and Maritimen Meteorologie." The following data as well as the map shown on Plate VIII are taken from the number corresponding to the month of May, 1907, some additions having, however, been made to the map, in order to render it more useful for our purpose.

This line, or rather the axis of the depths ranging from 8,000 to 9,000 meters, begins near parallel 6° north and meridian 128° east of Greenwich and, running northwestward, approaches the meridian 127°, from which it never departs far until it reaches 8° north. From the latter parallel it continues in a north-northwesterly direction as far as parallel 13.5°, beyond which the bottom, after having reached the maximum depth of 9,000 meters, commences to rise by an easy gradient toward northwest. Between parallels 7° and 13° the trough lies always within 90 to 45 kilometers from the coast, which fact represents an extraordinary slope. From Mayo Bay in Mindanao to the northeast of Samar, the latter varies between 1:10 and 1:5. In several places the slope is not continuous and uniform from the coast to the bottom of the trough, but shows a bench or terrace at depths between 4,000 and 6,000 meters. The escarpment from the coast to the bench is as steep as 1:6 near the coast of Mayo Bay and 1:3 to the northeast of Samar, while that of the section from the said bench to the bottom of the depression is somewhat less pronounced. On the other hand, the eastern bank of the latter has a rise of only 4 kilometers in 180 (1:45): hence, this Philippine trough may be considered as monoclinal.

The eastern coasts of Japan are universally considered as highly unstable, owing to their steep declivity toward the trough of Tuscarola, which runs along the east of Japan and the Kurile Islands. But if we compare the conditions of instability found on the eastern coasts of Mindanao and Samar, as deduced from their declivity, with those of the region mentioned, we will readily see that our coasts must be much more unstable than those of the said empire. After

Plate VIII.

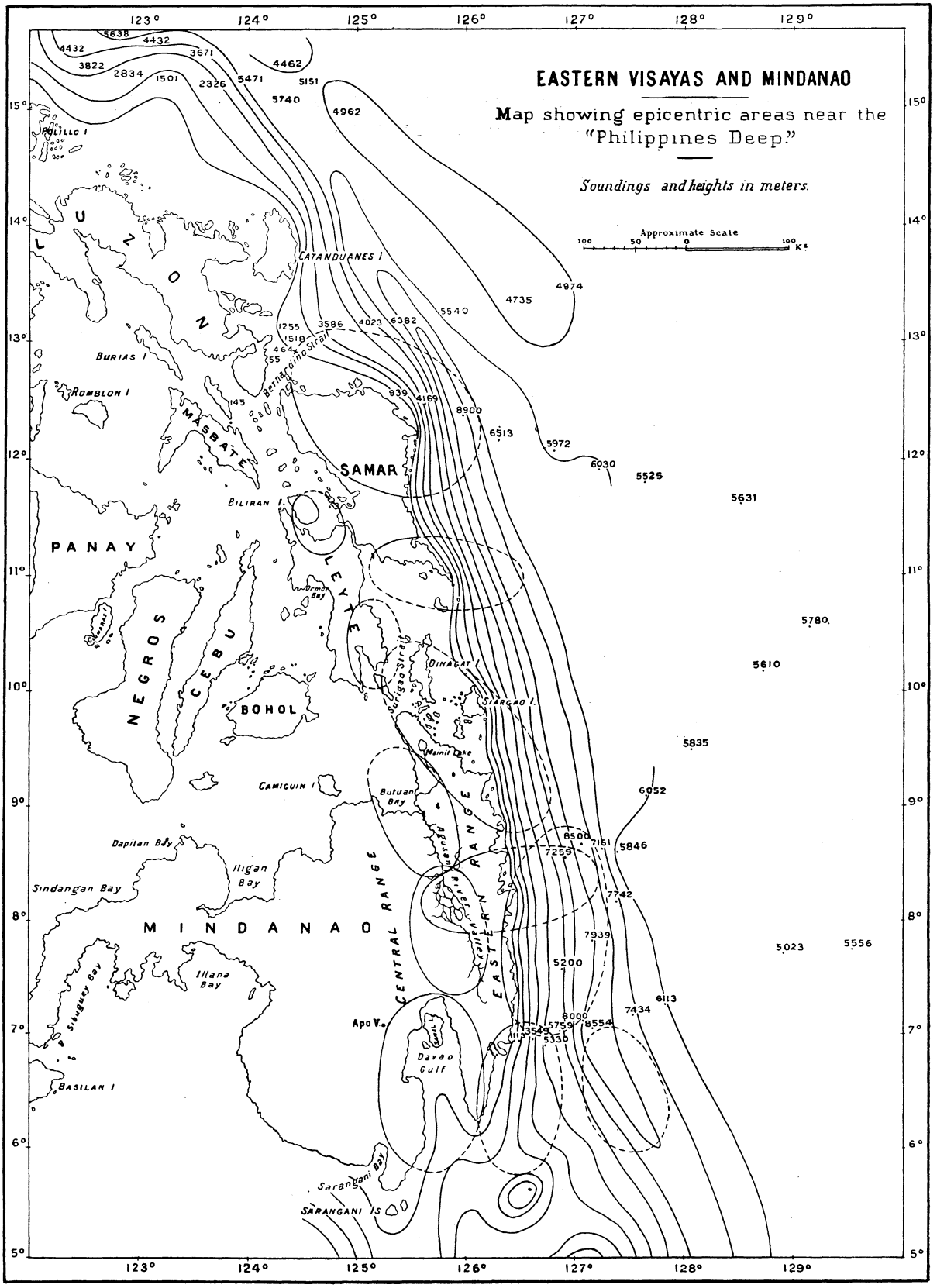
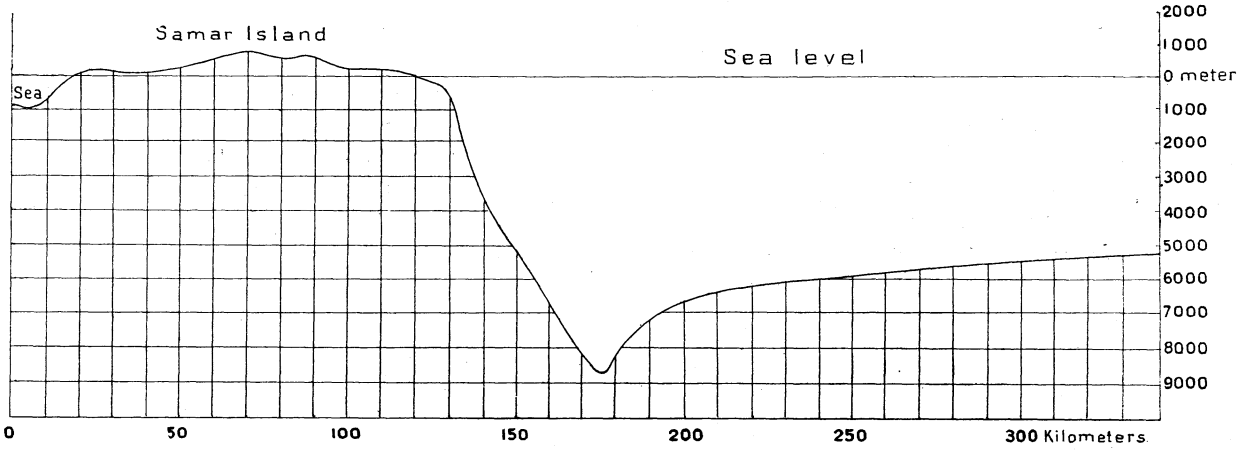
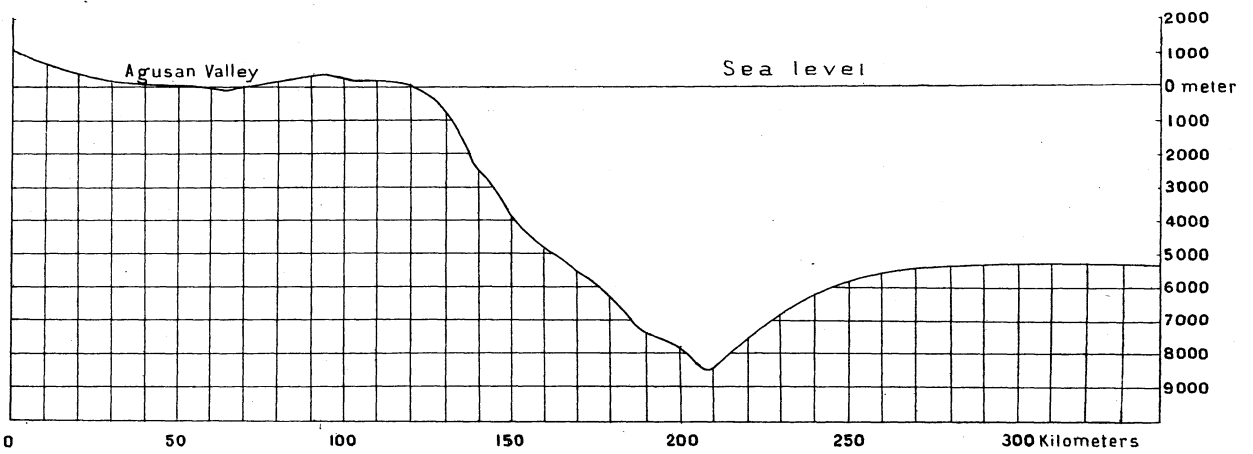

EASTERN VISAYAS AND MINDANAO
Map showing epicentric areas near the "Philippines Deep."
Soundings and heights in meters.
Approximate Scale
100 50 0 100 Kms
LUZON
CATANDUANES I
BURIAS I
ROMBLON I
MASBATE
SAMAR
BILIRAN I
PANAY
NEGROS
CEBU
LEYTE
BOHOL
CAMIGUIN I
DINAGAT I
SIARGAO I
MINDANAO
CENTRAL RANGE
EASTERN RANGE
Apo V.
Davao Gulf
Illana Bay
Iligan Bay
Dapitan Bay
Sindangan Bay
Butuan Bay
Malimit Lake
Surigao Strait
Ormoc Bay
Sarangani Bay
SARANGANI IS
BASILAN I
PALILLO I
123° 124° 125° 126° 127° 128° 129°
15° 14° 13° 12° 11° 10° 9° 8° 7° 6° 5°

Plate IX

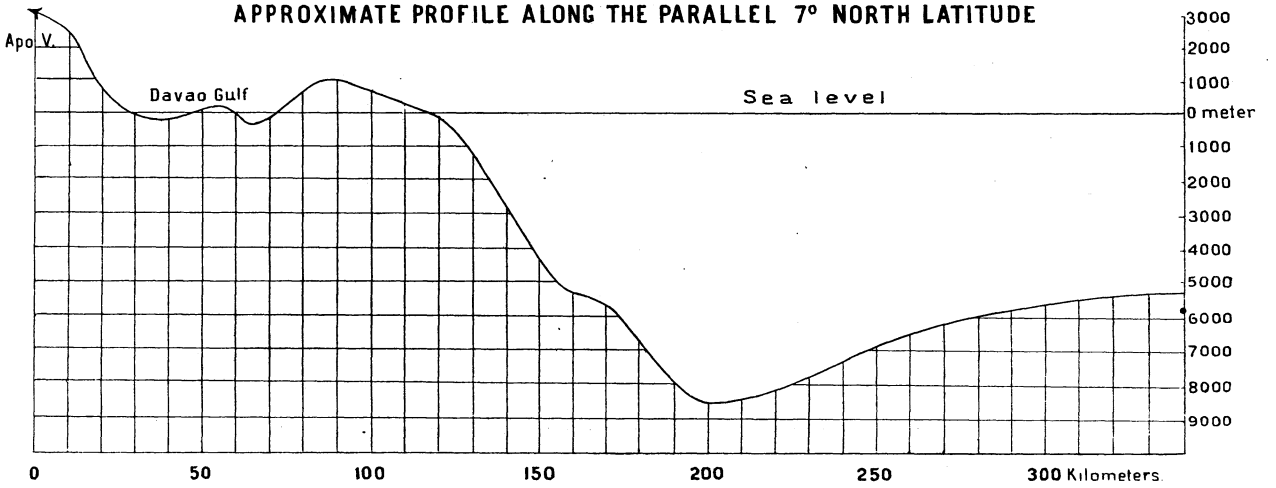
APPROXIMATE PROFILE ALONG THE PARALLEL 12° 10' NORTH LATITUDE



APPROXIMATE PROFILE ALONG THE PARALLEL 8° 8' NORTH LATITUDE



APPROXIMATE PROFILE ALONG THE PARALLEL 7° NORTH LATITUDE



all, according to Professor Milne, the Japanese slope, measured fom the high central mountains to the bottom of the Tuscarola trough, is only 1:30 to 1:20, being thus about the same as found on the western coasts of South America, from the ridge of the Andes to the bottom of the sea. Nevertheless, history seems to prove conclusively that, at least in modern times, the precipice on the eastern coasts of Mindanao and the Visayas has not been productive of so formidable dislocations and slides as those which have occurred in those of Japan and South America. Thus, for instance, there is no proof that any of even the most violent earthquakes which took place near the coasts of Mindanao and Samar during the last two centuries has been accompanied by one of those terrible "tsunami" which occasionally devastate the eastern coasts of Japan; nor seems there to be any record of so disastrous an earthquake as some which recently visited the coasts of Japan, Chile, and Peru.

Seismic centers situated along the coasts.—The data which we have hitherto been able to gather and which have been published in the Bulletins of the Weather Bureau and recently in a special catalogue,[1] enable us to point out as many as six different seismic centers, all of which appear to be intimately connected with the great trough. The first and southernmost of these is probably situated east of, and at a considerable distance from Cape San Agustin, that is, near the southern end of the "deep." In this part of the latter the bottom was found to be of volcanic nature. The records traced by the microseismographs of Manila Observatory lead to the conclusion that several earthquakes which during the last years have been felt with moderate intensity on the southeastern coasts of Mindanao, originated at a distance of about 200 kilometers to the east-southeast of Caraga; while others were undoubtedly due to a center closer to the cape mentioned.

A second center is found a little north of parallel 7°, a short distance from the coast. From it proceed the earthquakes which are usually felt along the entire east coast of Mindanao, from Surigao to Cape San Agustin. Its meizoseismic area extends to the coasts of Caraga and vicinity.

The third center seems to point to a fault-line which runs east to west, following approximately the parallel 8° 12′, from the trough in the Pacific to the Agusan River Valley. Where it crosses the eastern cordillera of Mindanao, the latter shows a large indentation, its height being reduced to only 130 meters above sea level.

The fourth and most important center is situated in the neighborhood of parallel 10°, close to the northeastern end of the island. The whole aspect of this part of Mindanao shows that profound disturbances must have taken place there. The great number of channels and diminutive islands, together with the prominent points, the gulfs and baylets of the region, suggest the idea of a network of fractures, such as is usually formed on the unstable borders of a precipice. The earthquakes of this seismic district, which comprises the part of Surigao Peninsula north and northeast of Lake Mainit, Dinagat and Siargao Islands and the many adjacent islets, originate sometimes to the east, in the Pacific and, hence, either in the "deep" or on its western slope, sometimes more to the west, in the vicinity of the so-called Surigao Strait. Thus the great earthquake of July, 1879, was due to a dislocation or fracture which extended, at least in part, over the northernmost portion of Surigao Peninsula; while the one which took place in November, 1871, appears to have proceeded from a point in the Pacific, south-southeast of Siargao Island.

A fifth center exists near the southeastern extremity of Samar Island, where there appears to be another fault-line extending westward in the general direction of the southern coasts of the island. Such line is suggested by the fact that some of the earthquakes of this region appear to originate in the Pacific, on the slope of the trough, while others have their seat of disturbance in various places not far from the coast mentioned. In the latter case, the shocks are perceptible only in the northeastern end of Leyte and southern Samar, while in the former the area shaken assumes the form of an elongated ellipse stretching from eastern Samar as far as northeastern Mindanao.

[1] Catalogue of Violent and Destructive Earthquakes in the Philippines, 1599–1909. Manila, 1910.

Finally, a sixth center is found near northeastern Samar. Here a secondary fault-line appears to run west or northwestward, toward the San Bernardino Strait.

Each of the centers enumerated, except the fifth, situated southeast of Samar, has caused some violent earthquake of tectonic character within the last half of a century, of sufficient intensity to be registered at all the seismological observatories of the globe.

The seismotectonic line of the Agusan River Valley.—We call this line the "Line of the Agusan River Valley" because the portion of it which lies within the said valley has been the seat of the greatest number of violent earthquakes which occurred during the last fifty years. The first seismic district of importance of this line comprises the large Gulf of Davao, which is 120 kilometers long and 50 to 70 kilometers wide. The average depth of this basin is 800 meters, increasing, however, toward southeast in such manner as to exceed 1,650 meters west of Cape San Agustin. Its bottom consists almost exclusively of mud, sand having been found only in a few places. To the west of the gulf rise the gigantic Apo Volcano, the Matutun and several other cones of less importance, which constitute the northern boundary of the volcanic zone extending, as it seems, from Mount Apo as far as the Celebes, and being represented by the Matutun, Sarangani and Sanguir cones. According to the latest reconnaissance made by Dr. Warren D. Smith, chief of the mining division, Bureau of Science,[1] the highest peak, known as "Apo Volcano" (2,957 meters), on whose eastern slope occurs the only active solfatara of the whole group, nevertheless does not constitute the outlet from which poured forth the immense quantity of lava, tuff and other volcanic ejecta that cover the surrounding country. The real crater of explosion is found some 8 kilometers to the northeast of Mount Apo, which latter is evidently of schistose structure and exhibits the characteristics of an anticlinical. The undulated plains which form the Davao district to the west and northwest of the gulf are of alluvial origin. Northwest of the town of Davao, this formation shows a terrace, which is an ancient beach now more than 15 meters above sea level.

The mountain range on the eastern side of the gulf, called the Pujala Peninsula, consists mainly of metamorphic rocks, while its coasts are composed of rocks of sedimentary origin. Its greatest height, found in the northern part, hardly reaches 1,000 meters.

The relatively low mountains which are north of the Gulf of Davao and separate it from the Agusan River Valley are built up of various strata of limestones, gravel, and fossiliferous clays which, to judge from the excellent state of preservation of the marine shells embedded in them, are of very recent formation and emersion. In many places is found evidence of dynamic action, consisting in displacements and folding of the clay layers. There is no real cordillera in this region to serve as a link between the eastern and central cordilleras of Mindanao: we find only several series of hills each of which is apparently arranged in the direction SSE-NNW. These mark the respective divides of the watersheds of the Agusan, Sahug, and Tagun Rivers; their heights vary between 200 and 400 meters above sea level.

The extensive valley of the Agusan River runs from south-southeast to north-northwest, almost parallel to the east coast of Mindanao, for a distance of about 200 kilometers. Its width is very variable, owing to the numerous spurs which jut into it from both the eastern and western cordilleras. The valley may be considered as divided into two parts: the southern, which terminates near parallel 8° 30′, a short distance north of the lake region; and the northern, from the rapids of Santa Inés to Butuan Bay. At the point of demarcation, near the rapids mentioned, the valley becomes narrow and the river has a considerable gradient, which is shown especially by the said rapids. Below the latter the valley widens more and more until Butuan Bay is reached. The permanent lakes formed by the Agusan in the southern part of its course are three in number, Linao, Dagun, and Pinayat; but during the months of heavy rains they coalesce into one huge body of water, more than 50 kilometers in length. To the principal depression of the valley bottom occupied by the lakes seems to correspond a break in the eastern mountain range, where

[1] The Philippine Journal of Science. Vol. III, G eneral Science, pages 493–498.

the maximum height of the ridge is only 130 meters above sea level. The entire bottom of the Agusan Valley consists of marine sediments containing an abundance of recent shells: only at the mouths of the water courses, which descend from the mountains bounding it east and west, is found gravel containing well-worn pebbles of andesite and other igneous rocks. Every geologist who has visited this part of eastern Mindanao received the same impression, to wit, that its emersion from the sea is of quite recent date, and its elevation is still increasing. Some of them assign the post-Pliocene period as the epoch of the formation of the sediments found in the Agusan Valley, in which supposition its emersion from the sea must have taken place during a much later period. This valley and the Davao Gulf appear to be portions of one and the same synclinal. The mountain range known as the eastern cordillera, which separates the Agusan Valley from the great trough in the Pacific, has not yet been explored: it would appear that few of its peaks reach a height of 1,000 meters. From partial reconnaissances we know that in the northern part thereof extrusive rocks abound, where also gold placers occur; east and southeast of the Agusan lakes are found sedimentary formations belonging to the Tertiary period; finally, in the southern part, which comprises the Pujala Peninsula, the same sediments are encountered together with metamorphic rocks. The peculiar position of the latter mountain chain suggests the idea of a coastal range, and the whole physiographic aspect of this eastern portion of Mindanao seems to confirm the explanation of the formation of mountains recently put forward by Dr. T. T. See.[1] The tectonic movements which take place in this region are more probably those of anticlinal folding, corresponding to the synclinal movements in the Pacific, than those of a general uplift. The great earthquakes which occurred in the Agusan Valley in 1893 and 1894 produced extensive subsidences in the southern part of the lakes and great fissures and landslides in the southern mountains which lie between the valley and the Davao Gulf. In view of these facts we suggested at the time[2] the idea that the tectonic movements might have been those of a discordant adjustment in the cordillera to the east of the valley and the mainland west of it; such movements would naturally result in faults developing in the said mountains which apparently form the connecting link between both. Thus far there are not sufficient data available to prove such discordance of movements; may be that a more complete investigation of the marine terraces near Davao and of the western slopes of the Agusan Valley will throw more light on the subject.

On leaving the Agusan Valley, the seismotectonic line which we are describing, still retaining its north-northwest course, passes through the eastern part of Butuan Bay and the west coast of the Surigao Peninsula, and enters the extreme southeast of Leyte Island with its extinct volcano, Mount Cabalian. From this point the line runs parallel to the mountain chain which, starting from the said volcano, traverses Leyte in an approximately northwestern direction, and seems to continue as far as the volcanic Island of Biliran, well known for its sulphur deposits.

This entire region, comprising part of Surigao Peninsula and Leyte Island with the adjacent Islands of Biliran and Panaon, is very complicated, both in its physiography and geological conditions.[3] Leyte is crossed, from its northern coast to its extreme southeast, by a cordillera of eruptive origin, which contains the solfataras of Burauen and the volcanic cones Amandiuing and Cabalian. Continuations of this mountain chain seem to be, in the north, Biliran Island, in the southeast the volcanic andesite cone, Mount Canmahat, on the Surigao Peninsula. Very characteristic is the sinuous strait or canal between Samar and Leyte Islands (San Juanico Strait); it looks very much as if it were a very recent fracture. On the other hand, the great depth of Surigao Strait in that part which separates Mindanao from Leyte suggests the existence of a synclinal, which makes it difficult to bring the volcanic formations in the southeasternmost part

[1] Proceedings of the American Philosophical Society. XLVII, 189 K. September, 1908.

[2] Revista Sísmica. Junio de 1893.

[3] Geological Reconnaissance of the Island of Leyte. By G. J. Adams, geologist of the division of mines, Bureau of Science.

of Leyte in connection with those of the Surigao Peninsula without the supposition of tremendous dislocations subsequent to the period of eruption. It seems to be beyond doubt that in the southeastern part of Leyte exists a whole network of faults of moderate depths, which constitute the various so-called volcanic centers of seismic activity which we now proceed to describe.

Seismic centers of the seismotectonic line of the Agusan Valley.—There are five clearly distinct centers on this line. The first of these would appear to be underneath the Davao Gulf. The violent earthquakes of this region have, however, apparently no fixed place of origin; on the contrary, they seem to proceed from widely different points: sometimes they originate near the eastern coast of the gulf, at others near the western, and occasionally in the volcanic region of Mount Apo. As a rule, they present the characteristics of tectonic earthquakes.

The second and most important center is that of the southern part of the Agusan River Valley. Here appears to exist an extended line of fracture; because of the most violent earthquakes some have probably originated in the lake region and others further south, near the divide between the Agusan River and the Rivers Sahug and Tagun, which latter empty into Davao Gulf. The character of these earthquakes is likewise tectonic. During the last twenty years this region undoubtedly has been and still continues to be the most active center within the Philippine Archipelago. No less than thirteen violent earthquakes, ranging in intensity from VI to X of the scale, have been due to it in this short period.

The third center is found in the region comprising the mouth of the Agusan and the eastern part of Butuan Bay. It must consist of a number of superficial fracture-lines in which originate frequent earthquakes of volcanic character. During the last few years there have been felt in this region numerous shocks of intensity VI and VII, whose perceptibility was limited to a very small area and which were not registered by the microseismographs of Manila Observatory, though the latter is only some 750 kilometers distant.

A fourth center, in the southeastern end of Leyte, must be located near the volcanic cone of Cabalian. During May, 1907, this region witnessed a period of very intense seismic activity, the most important in the earthquake history of southeastern Leyte. But all the shocks, even the most violent, were of purely local and volcanic character, so much so that, out of 60 earthquakes experienced in the space of a few days, only 8 were perceptible at a distance of 30 kilometers, and even the seismographs at Manila, at a distance of 650 kilometers, registered only a few, whose intensity was between VII and VIII.

The fifth center is situated near the northern coast of Leyte, or between this coast and Biliran Island. The earthquakes due to this center seem to be likewise of volcanic nature, as the area within which their violence is felt is very limited. The severest disturbances experienced in this region during the last half century occurred in July, 1877, and February, 1890.

We might include here the center or centers which exist in the neighborhood of Masbate Island, as belonging to the seismotectonic line under discussion; but we prefer to reserve them for another paper, as the Island of Masbate presents most peculiar characteristics. It consists of two prongs which run precisely in the directions of the two principal trends of the Visayan Islands and southern Luzon, as if it were a center toward which converged the axes of the tectonic strains that gave to the Archipelago its present relief and lineaments.

We must, however, mention here another center which, though considerably outside of the general trend of this seismotectonic line, can hardly be included in any other. This is found near the west coast of Leyte, in Ormoc Bay. It is the origin of frequent earthquakes of volcanic character which, although they are felt with force VI and VII in the towns surrounding the bay, are rarely perceptible at a distance of 50 kilometers in the south, north, and northeast of the island.

Seismicity of Samar, Leyte, and eastern Mindanao.—The seismicity of the regions of the Archipelago under discussion results very high, whether we deduce it only from the number of violent and destructive earthquakes given in the catalogue mentioned in the beginning of the present paper, or take into account all the earthquakes of whatever intensity. Of the violent and

destructive earthquakes which have taken place in the Philippines during the last half century, or, more accurately, since the foundation of Manila Observatory, 29 per cent had their origin in these regions; while of the total number of seismic disturbances experienced during the same period fully 50 per cent fall to their share. If we remember that their combined land area of approximately 24,980 square miles (64,700 square kilometers) is only one-fifth of the whole area of the Philippine Islands, their seismicity is found to be extraordinarily high. This is in perfect agreement with the conditions which render them especially unstable.

CENTROS SÉISMICOS DE SÁMAR, LEYTE Y DE LA PARTE ORIENTAL DE MINDANAO.

Esta parte del Archipiélago es sin duda una de las más inestables. La distribución de los distintos epicentros ó distritos más intensamente repercutidos por los diferentes terremotos violentos de que se conserva memoria, parece señalar dos líneas seismotectónicas casi paralelas. Una corre á lo largo de las costas orientales tanto de Mindanao como de Sámar; la otra, arranca del Golfo de Davao, y se prolonga en dirección al N y NNW á lo largo del valle del Río Agusan y de la parte oriental de la bahía de Butúan, extremo SE de Leyte, costa N de Leyte é isla de Biliran, hasta terminar cerca de Masbate. Ambas líneas presentan carácteres especiales y propios, tanto con respecto á sus condiciones de relieve como con respecto á su seismicidad: de una y otra procuraremos dar una idea en esta breve nota.

Línea seismotectónica costera.—La causa de la grande inestabilidad observada en las costas orientales de Mindanao y de Sámar púsose de manifiesto en Enero y Febrero de 1907, con el descubrimiento de una profundísima fosa marina que las bordea. Este descubrimiento se debe al Cañonero Alemán *Planet* en su viaje de exploración hidrográfica al rededor del mundo: cuyos resultados se publicaron en los "Annalen der Hydrographie und Maritimen Meteorologie." Del número correspondiente á Mayo de 1907 hemos tomado los datos siguientes así como el mapa que presentamos (lámina VIII), el cual es una reproducción del allí publicado aunque con algunas adiciones necesarias para nuestro objeto.

La línea ó eje de profundidades comprendidas entre 8,000 y 9,000 metros comienza cerca del paralelo 6° N y del meridiano 128° E de Greenwich y tomando una dirección NW se acerca al meridiano 127° del cual apenas se aleja hasta el paralelo 8°: desde éste continúa en dirección NNW hasta el paralelo 13.5°, donde el fondo después de llegar á la máxima profundidad de 9,000 metros comienza á subir con suave pendiente hacia el NW. Desde el paralelo 7° hasta 13° se mantiene siempre entre 90 y 45 kilómetros de distancia de la costa, lo cual representa un desnivel extraordinario: desde las costas del seno de Mayo en Mindanao hasta las del NE de Sámar varía entre 1 en 10 y 1 en 5 kilómetros. En varios sitios este declive no es continuo y uniforme desde la costa hasta el fondo de la fosa, sino que presenta un escalón ó terraza entre las profundidades de 4,000 y 6,000 metros. La primera sección del declive, ó el escalón inmediato á la costa tiene una pendiente de 1 en 6 en las costas citadas del seno de Mayo y 1 en 3 en la parte NE de Sámar: la pendiente del segundo escalón es algo menos pronunciada. Como esta fosa filipina presenta por el lado oriental un declive muy poco pendiente, menos de 4 kilómetros en 180, puede considerarse como un monoclinal.

Si comparamos las condiciones de inestabilidad de las costas orientales de Mindanao y Sámar, deducidas de su declive, con las de las costas orientales del Japón, las cuales son consideradas como altamente inestables por razón también de su pronunciado declive hacia la fosa de Tuscarola, que se abre al E del Japón y de las islas Kuriles, deduciremos fácilmente que las nuestras deben ser mucho más inestables que las de aquel Imperio. En efecto: según el Prof. Milne el declive japonés desde las altas montañas centrales hasta el fondo de la fosa Tuscarola es solo de 1 en 20 á 1 en 30 kilómetros, semejante al que existe en las costas occidentales de América del Sur, desde la cumbre de los Andes hasta el fondo del mar. Sin embargo la historia parece demostrar que en el precipicio de las costas del E. de Mindanao y Visayas no se han producido en los tiempos modernos dislocaciones y derrumbamientos tan formidables como en los de Japón y Sud-

América. Por de pronto no consta que ninguno de los más violentos terremotos ocurridos cerca de las costas de Mindanao y Sámar durante los dos últimos siglos haya sido acompañado de los devastadores "Tsunamis" que tienen lugar en las costas orientales de Japón: tampoco parece registrar la historia ningún terremoto tan desastroso como algunos recientes de las costas de Japón, Chile y Perú.

Centros séismicos situados á lo largo de las costas.—Con los datos que hasta hoy nos ha sido posible reunir, publicados en un reciente Catálogo[1] y en los Boletines del Observatorio, se pueden señalar hasta seis distintos centros íntimamente relacionados al parecer con la gran fosa. El primero y más meridional probablemente está situado al E y algo distante del Cabo de San Agustín, ó sea hacia el extremo sur de la fosa. La naturaleza del fondo en esta parte de la fosa se encontró ser volcánica. En estos últimos años varios terremotos sentidos con mediana intensidad en las costas SE de Mindanao se originaron, según se dedujo de los registros de los microseismógrafos de Manila, á distancias de unos 200 kilómetros al ESE de Caraga; otros en cambio se originan sin duda en un centro más cercano al expresado Cabo.

Un segundo centro puede situarse un poco al N del paralelo 7° y á poca distancia de la costa. De este centro proceden los terremotos que suelen sentirse á lo largo de toda la costa oriental desde Surigao hasta el Cabo de San Agustín. Su área meizoséismica se extiende á las costas de Caraga y sus cercanías.

El tercero, parece indicar una línea de fractura que se prolonga de E á W, siguiendo próximamente el paralelo 8° 12′ desde la fosa del Pacífico hasta el valle del Río Agusan, á través de la cordillera oriental de Mindanao, la cual en esta parte presenta una grande ondulación y queda reducida á la altura de solos 130 metros sobre el nivel del mar.

El cuarto y más importante está situado hacia el paralelo 10° próximo al extremo NE de la Isla. El solo aspecto de esta parte de Mindanao indica que deben haber tenido lugar en ella profundas dislocaciones. El gran número de canales é islotes, con las prominentes puntas, golfos y pequeñas bahías que aquí concurren, sugiere la idea de una red de facturas, cuales se suelen formar en los bordes inestables de un precipicio. Los terremotos de este distrito séismico, que comprende la parte N y NE de la península de Surigao hasta el lago Mainit y las islas Dinagat y Siargao, con los numerosos islotes adyacentes, tienen su origen unas veces al E en el Pacífico, y por consiguiente dentro de la fosa ó en su borde occidental, y otras más al W, hacia el llamado Estrecho de Surigao. Así, por ejemplo, el gran terremoto de Julio de 1879 se originó en una dislocación ó rotura que comprendió, á lo menos en parte, el extremo N de la península de Surigao; mientras que el ocurrido en Noviembre de 1871 aparentemente tuvo su centro en el Pacífico al SSE de la isla de Siargao.

El quinto centro está cerca del extremo SE de la isla de Samar. Aquí también existe probablemente una línea de dislocación que se prolonga hacia el W en la dirección de la costa sur de Sámar: pues los temblores unas veces parecen originarse dentro del Pacífico en el borde de la fosa y otras en diferentes puntos cercanos á la costa citada. En estos casos son perceptibles solamente en el extremo NE de Leyte y S de Sámar, mientras que en el primero el área repercutida tiene la forma de una elipse prolongada desde la parte oriental de Sámar hasta el NE de Mindanao.

El sexto y último está cerca del NE de Sámar. Una línea de fractura secundaria parece extenderse hacia el W ó NW en dirección al Estrecho de San Bernardino.

En todos los centros enumerados, excepto en el quinto, al SE de Sámar, se ha originado durante el último medio siglo algún terremoto violento y de caracter tectónico, registrado en todos los observatorios seismológicos del globo.

Línea seismotectónica del Valle del Río Agusan.—Le damos este nombre por ser el valle del Río Agusan la región de esta línea donde en los últimos cincuenta años ha ocurrido el mayor número de terremotos violentos. El primer distrito séismico importante de esta línea es el gran Seno de Davao, que mide unos 120 kilómetros de longitud y de 50 á 70 kilómetros de anchura, mientras

[1] Catalogue of Violent and Destructive Earthquakes in the Philippines, 1599–1909. Manila, 1910.

su profundidad media en el interior es de 800 metros y va aumentando en dirección al SE, de manera que al W de la punta de San Agustín llega ya á más de 1,650 metros: su fondo es casi exclusivamente de lodo, encontrándose arena en algunos sitios. Al W del Golfo se levantan el gigantesco volcán Apo, el Matutun y algunos otros conos de menor importancia que constituyen el límite septentrional de la zona volcánica que parece extenderse desde el Apo hasta Célebes, representada por el Matutun, Sarangani y Sanguir. Según el último reconocimiento de esta región, llevado á cabo por el Dr. W. Smith, jefe de la División de Minas, Bureau of Science.[1] El elevadísimo pico conocido con el nombre de volcán Apo (2,957 metros) y en cuya vertiente oriental existe la única solfatara activa de este grupo volcánico, no constituye el cráter que emitió la inmensa cantidad de lavas, tobas y otras deyecciones que cubren los terrenos circunvecinos. El verdadero cráter de explosión se halla á unos 8 kilómetros al NE: mientras que el pico del Apo es evidentemente de estructura schistosa y presenta los caracteres de un anticlinal. Las llanuras onduladas, que constituyen la región de Davao al W y NW del Golfo, están formadas por aluviones; en estas formaciones se distingue al NW de la población de Davao una terraza ó antigua playa marina á más de 15 metros sobre el actual nivel del mar.

La cordillera, llamada Península de Pujala, que cierra el Golfo por el E, está constituída en su parte central por rocas metamórficas mientras que sus costas constan de rocas de origen sedimentario: su mayor altura en la parte N apenas parece llegar á 1,000 metros.

La serie de montañas relativamente poco elevadas que rodean el Golfo de Davao por el N y lo separan del valle del Río Agusan están constituídas por diferentes capas de calizas, areniscas y arcillas fosilíferas, las cuales, á juzgar por el excelente estado de conservación de las conchas marinas encerradas en ellas, son de muy reciente formación y emersión. En no pocas partes se presentan los efectos de la acción dinámica, manifestados por las dislocaciones y plegamientos de las capas arcillosas. No existe en esta parte verdadera cordillera que enlace la del Pacífico con la Central de Mindanao, sino varias series de lomas en dirección aproximada SSE-NNW que separan respectivamente los cauces de los ríos Agusan, Sahug y Tagun: su altura sobre el nivel del mar varía entre 200 y 400 metros.

El extenso valle del Río Agusan corre en dirección SSE-NNW casi paralelo á la costa oriental de Mindanao, y tiene una longitud de cerca de 200 kilómetros; su anchura es muy variable á causa de los numerosos estribos que arrancan de las cordilleras oriental y occidental. Puede considerarse dividido en dos partes: la parte sud hasta cerca del paralelo 8° 30′, un poco más al N de la región de los lagos, donde el valle se estrecha mucho y el río tiene bastante desnivel manifestado por los rápidos de Santa Inés; la parte norte, que desde la citada angostura se va abriendo más y más hasta la Bahía de Butuan. Los lagos del Agusan son tres permanentes, Linao, Dagun y Pinayat; pero en tiempo de lluvias vienen á formar uno solo y ocupan una extensión de más de 50 kilómetros de longitud. Á esta depresión principal del valle parece corresponder también en la cordillera oriental una abertura ó depresión cuya mayor altura es de solos 130 metros sobre el nivel del mar. Todo el valle del Río Agusan está formado de sedimentos marinos en los que abundan las conchas recientes: solo en las confluencias de los ríos que descienden de los montes del E y del W se encuentran gravas con cantos rodados de andesita y otras rocas de origen ígneo. Cuantos geólogos han visitado esta parte oriental de Mindanao se han quedado con la misma impresión de que su emersión es muy reciente, continuando aún su elevación: algunos señalan el período postplioceno para el depósito de los sedimentos del valle del Agusan, debiendo ser muy posterior su emersión. Este valle y el Golfo de Davao parecen constituir un mismo sinclinal. La serie de montañas conocidas con el nombre de cordillera oriental, que separa el valle del Agusan de la gran fosa del Pacífico no ha sido explorada: parece que son pocas las cumbres que llegan á 1,000 metros de altura. Por reconocimientos parciales se sabe que abundan en la parte N, donde existen los placeres de oro, las rocas extrusivas; hacia el E y SE de los lagos del Agusan se encuentran formaciones sedimentarias terciarias y en la parte

[1] The Philippine Journal of Science. Vol. III, General Science, páginas 493–498.

S que comprende la península de Pujala, los mismos sedimentarios y rocas metamórficas. La posición peculiar de esta línea de montañas sugiere la idea de una cordillera costal, y toda la fisiografía de esta parte oriental de Mindanao parece como una prueba que confirma las ideas sobre la formación de las montañas recientemente expuestas por el Dr. T. T. See.[1] Los movimientos tectónicos que en ella tienen lugar probablemente son de plegamiento anticlinal, correspondiente al sinclinal del Pacífico, más bien que de levantamiento general. Los grandes terremotos ocurridos en el valle del Agusan en Junio de 1893 y 1894 produjeron extensos hundimientos de terreno en la parte sur de los lagos y grandes grietas y derrumbes en los montes del S que median entre este valle y el Golfo de Davao. Por este motivo sugerimos entonces [2] la idea de movimientos tectónicos de ajuste discordantes en la cordillera oriental del valle y en la tierra firme occidental, los cuales debían causar roturas ó fallas en dichos montes, que aparentemente constituyen un lazo de unión entre ambas. No existen aún datos suficientes que prueben tal discordancia; cuando se hayan reconocido mejor tanto las terrazas marinas existentes en Davao como las vertientes occidentales del valle del Agusan tal vez se hará más luz en esta materia.

La línea seismotectónica que describimos al dejar el valle del Agusan continúa hacia el NNW por la parte oriental de la bahía de Butúan y costas occidentales de la península de Surigao y entra después en la Isla de Leyte por su extremo SE donde existe un volcán extincto en el monte Cabalian. Desde aquí sigue paralela á la cordillera central que arrancando de dicho volcán atraviesa la isla en dirección próximamente al NW y parece luego continuar hasta la isla volcánica de Biliran, muy conocida por sus depósitos de azufre.

Toda esta región que comprende parte de la península de Surigao y la Isla de Leyte con sus adyacentes Biliran y Panaon es muy complicada tanto en su fisiografía como en sus condiciones geológicas.[3] La Isla de Leyte está cruzada desde su costa N á su extremo SE por una cordillera de origen ígneo ó eruptivo, que encierra en su recinto las solfataras de Burauen, y los conos volcánicos de Amandiuing y Cabalian. Continuaciones de esta cordillera parecen ser, por el N la Isla de Biliran, por el SE el cono volcánico andesítico Canmahat de la península de Surigao. Es muy característico el estrecho sinuoso ó canal que separa las Islas de Leyte y Sámar, como si se tratara de recentísima fractura. En cambio la gran profundidad del Estrecho de Surigao en la parte que separa Mindanao de Leyte sugiere un sinclinal que dificulta el relacionar las formaciones volcánicas del extremo SE de Leyte con las de la península de Surigao, sin suponer dislocaciones tremendas después de la época de su erupción. Parece indudable que en esta región de la Isla de Leyte existe una red de fracturas poco profundas que constituyen, como se verá luego, varios epicentros de los llamados volcánicos.

Centros seísmicos de esta línea seismotectónica.—Cinco son los centros bien distintos de esta línea. El primero en el Golfo de Davao. Los terremotos violentos de esta región no tienen un centro aparentemente fijo antes al contrario parecen originarse en muy diferentes sitios, unas veces cerca de su costa oriental, otras cerca de la occidental y alguna que otra vez en la región volcánica del Apo. Generalmente presentan los caracteres de terremotos tectónicos.

El segundo centro y el más importante es el de la parte S del valle del Agusan. Aquí parece existir una extensa línea de fractura; pues de los más violentos terremotos unos se han originado probablemente en la región de los lagos y otros más al S cerca de la divisoria entre el Río Agusan y los ríos Sahug y Tagun que corren hacia el Golfo de Davao: su carácter es asímismo tectónico. Durante los últimos 20 años indudablemente éste ha sido y sigue siendo el centro más activo de Filipinas, no menos de trece terremotos violentos (VI-X de la escala) se han originado en él en tan corto período.

El tercero se halla en la región que comprende la parte oriental de la bahía de Butúan y de la desembocadura del Río Agusan. Debe consistir en varias líneas superficiales de fractura,

[1] Proceedings of the American Philosophical Society. XLVII, 189 K. September, 1908.

[2] Revista Séismica. Junio, 1893.

[3] "Geological Reconnaissance of the Island of Leyte." By G. J. Adams, geologist of the division of mines, Bureau of Science. 1909.

en las que suelen originarse frecuentes terremotos de carácter volcánico. Los últimos años se han sentido en esta región numerosos terremotos de intensidad VI y VII en un área muy pequeña y sin que fuesen registrados por los microseismógrafos de Manila que dista solamente unos 750 kilómetros.

Un cuarto centro, en el extremo SE de Leyte, debe colocarse cerca del cono volcánico de Cabalian. En Mayo de 1907 hubo un período seísmico de gran intensidad, el más importante que registran los anales seísmicos del sur de Leyte: todos los terremotos aun los más violentos fueron de carácter local ó volcánico: de tal manera que de más de 60 temblores experimentados en pocos días solo 8 fueron perceptibles á 30 kilómetros de distancia, y los microseismógrafos del Observatorio de Manila, distante 650 kilómetros, únicamente registraron algunos de intensidad comprendida entre VII y VIII.

El quinto centro debe estar situado cerca de la costa N de Leyte ó entre dicha costa y la Isla de Biliran. Los terremotos de este centro parecen ser asímismo de carácter volcánico, atendida la pequeñez del área en que suele sentirse su violencia. Los terremotos más violentos sentidos en esta región durante el último medio siglo ocurrieron en Julio de 1877 y Febrero de 1890.

Aunque podríamos incluir en esta línea seismotectónica el centro ó centros existentes en las cercanías de la Isla de Masbate, los reservamos sin embargo para otro artículo, por presentar esta isla caracteres especialísimos. Consta de dos espolones que se prolongan precisamente en las dos direcciones que predominan en las otras islas y sus principales cordilleras, como si fuera un centro donde parecen concurrir los diferentes esfuerzos tectónicos que dieron su actual relieve al Archipiélago.

Debemos mencionar sin embargo otro centro, el cual aunque algo desviado hacia el W difícilmente puede incluirse en otra línea seismotectónica. Este se halla cerca de la costa W de Leyte en la bahía de Ormoc: en él se originan frecuentes temblores de carácter volcánico, los cuales con tener intensidad VI y VII en los pueblos que rodean la bahía, rara vez son perceptibles á 50 kilómetros de distancia hacia el S y hacia el N y NE de la isla.

Seismicidad.—La seismicidad de esa parte oriental del Archipiélago que nos ocupa, resulta muy alta, tanto si la deducimos del número de terremotos violentos y destructores que figuran en el Catálogo citado al principio, como si la sacamos del número total de temblores de cualquier intensidad. De los terremotos violentos y destructores ocurridos en Filipinas durante la última media centuria ó sea desde la fundación del Observatorio de Manila, el 29 por ciento tuvieron su origen en esa parte oriental y del número total de temblores el 50 por ciento pertenece también á las mismas regiones. Considerando por tanto que su área terrestre de 24,980 millas cuadradas (64,700 kilómetros cuadrados) viene á ser la quinta parte de la total de las Islas Filipinas, resulta que posee una seismicidad máxima, en perfecta consonancia por otra parte con sus condiciones especiales de inestabilidad.

BULLETIN FOR SEPTEMBER, 1910.

METEOROLOGICAL BULLETIN FOR SEPTEMBER, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—The monthly mean of atmospheric pressure differed but slightly from both, the normal for the month and that for September, 1909. Thus, at Manila, its difference from the normal was —0.27 millimeter, and from the mean for the same month of the preceding year +0.03 millimeter. The highest pressures were everywhere recorded on the 18th, and the lowest on the 28th or 29th.

The mean monthly temperature resulted either identical, or a trifle lower than for September, 1909. As regards Manila, the highest and lowest temperatures were 33.7° C and 22.4°C, which were recorded on the 8th and 7th, respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR SEPTEMBER, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from September, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from September, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran(1)	757.10	----------	759.24	18	755.61	7	27.6	0	34	4	22	16
Surigao	57.69	+0.10	59.98	18	56.38	28	27	—0.3	34.1	3	21.9	16
Cebu	57.54	— .16	59.77	18	56.20	28	26.7	— .2	32	2,5,7	22.4	27
Iloilo	57.82	— .16	60.01	18	56.19	29	26.3	— .1	33	23	22	15
Ormoc	57.71	+ .06	59.90	18	56.30	29	26.1	— .3	32.5	7	20.8	23
Tacloban	58.08	+ .41	60.52	18	56.40	28	27.2	— .4	35.2	3	22.2	11
Capiz	57.52	----------	60.22	18	55.42	29	26.9	+ .1	33.5	2	22.9	22
Calbayog	57.84	0	60.36	18	55.92	28	26.9	— .2	33.1	25	22.1	16
Legaspi	57.30	+ .07	60.11	18	54.66	28	26.8	— .4	34	7	21.3	22
Atimonan	56.99	+ .02	60.12	18	53.56	29	27.1	0	35.2	2	22.3	17,26
Manila	57.23	+ .03	60.39	18	53.52	29	26.1	— .2	33.7	8	22.4	7
San Isidro	56.92	0	60.15	18	52.96	29	25.8	— .8	32.7	8	22.5	17,23
Dagupan	56.78	+ .07	60.34	18	52.24	29	26.6	— .5	35	12	22.5	25
Bolinao	56.31	— .15	60.02	18	51.38	29	26.3	— .3	33.6	16	22.5	21,25
Baguio(2)	634.82	— .22	637.71	18	630.91	29	17.7	— .1	25.2	13	14.8	24
Vigan	756.44	— .14	760.22	18	750.82	29	26.6	— .3	33.5	25	22.3	6
Tuguegarao	56.35	+ .04	59.81	18	51	29	27.5	— .7	37.5	1	22	21
Aparri	56.51	— .05	60.10	18	51.01	29	27.1	— .6	33.6	3	22.5	9

(1)The barometric readings of this station seem to be too low. (2)The barometric readings of this station are not reduced to sea level.

Precipitation.—Only ten stations reported a rainfall for the month below that of last year. The amount collected in the rain gauges of the Central Observatory surpassed the normal for the month by 133 millimeters, and the total for September, 1909, by 140.8 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF SEPTEMBER, 1910.

Station.	Total.	Departure from September 1909.	Rainy days.	Departure from September 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from September 1909.	Rainy days.	Departure from September 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	236.8	+100.4	12	— 2	45.7	11	Calapan	192.4	— 61.2	20	+ 2	29.6	13
Isabela, Basilan	368.2	+212.8	27	+12	41.7	10	Virac	209.6	+ 108	17	+ 2	40.9	21
Zamboanga	146.6	+ 20.1	15	0	44.2	26	Nueva Caceres	390.6	+ 170.7	21	+ 2	75.4	27
Davao	259.7	—218.4	14	+ 2	36.6	21	Batangas	234.2	+ 68.2	23	+ 4	72.7	21
Cotabato	288.4	+140.1	22	+ 8	49.8	14	Atimonan	218.9	+ 67.9	17	+ 3	31.6	13
Dapitan	157.6	-------	13	------	52.6	15	Silang	673.7	+ 264.2	21	+ 5	84	28
Butuan	185.9	+ 55.6	20	+ 2	42.4	14	Santa Cruz, La Laguna	314	+ 53.2	24	+ 8	66.8	21
Dumaguete	191.8	-------	17	------	59.6	19	Antipolo	402.6	----------	24	------	53.8	18
Yap, W. Carolines	379.7	-------	24	------	83.3	24	Manila	499.1	+ 140.8	26	+ 5	48.4	6
Tagbilaran	129.7	— 95.4	11	— 4	39.1	20	Iba	833.3	----------	26	------	116.6	28
Surigao	232.3	+ 44.2	13	0	68.8	26	San Isidro	235.6	— 10.3	26	+ 5	29.9	27
Maasin	302.6	— 59.6	14	+ 1	97	20	Tarlac	361.3	+ 32	21	+ 9	70.6	9
Cebu	312.6	+155.3	21	+ 6	63.5	8	Dagupan	511.8	— 77.1	26	+ 7	69.8	9
Iloilo	432.4	— 62.1	26	— 2	45.7	8	Bolinao	795.8	— 31.3	27	+ 7	180.6	24
San Jose Buenavista	758.9	+ 7.5	27	0	143.3	26	Baguio	1024.5	+ 284.4	27	+ 1	424.5	24
Cuyo	644.8	-------	26	------	81.5	26	San Fernando, Union	387.7	— 44.9	22	+ 4	103.9	6
Ormoc	263.6	+ 59.2	19	+ 2	79.3	20	Echagüe	84.9	— 63.6	16	+ 1	41.9	24
Tacloban	170.5	+ 23.6	17	+ 4	40.1	20	Candon	537.3	+ 161.9	20	0	135.7	5
Capiz	390.8	+ 38.1	23	+ 5	126.5	11	Vigan	672.1	+ 123.6	22	+ 1	234.3	6
Borongan	352.5	+135.7	19	+ 3	83.8	26	Tuguegarao	179.7	+ 114.4	9	+ 3	95.6	24
Calbayog	398.3	+241.2	24	+ 4	143.7	20	Laoag	801.4	+ 358.6	20	+ 4	312.4	5
Masbate	310	+202.3	21	+ 3	77.5	20	Aparri	229.8	+ 68.8	17	+ 8	52.4	30
Legaspi	253.5	+ 23.1	18	— 2	43	27	Santo Domingo, Batanes Is.	559	+ 322.5	22	+ 2	111.7	6
Sumay, Guam	318.9	—177.3	25	+ 3	78.7	24							

DEPRESSIONS AND TYPHOONS.

Atmospheric disturbances have been unusually numerous during September. There were two principal periods of storms: one during the first, the other during the last week of the month, the former bringing very ugly weather to the Loochoos Islands and the Eastern Sea, the latter to the northern part of the Philippine Archipelago. We propose to say a few words on each of these disturbances.

THE TYPHOON OF THE FORMOSA CHANNEL, AUGUST 29 TO SEPTEMBER 5, 1910.

This typhoon was characterized by a curious and abnormal path which is shown on Plate X. Rev. Fr. Froc, Director of Zikawei Observatory, has published a pamphlet, "Storms in September, 1910," in which he gives, together with much detailed information, the most important and most unusual part of this storm's track in the Formosa Channel and likewise an abundance of data in support of same. We refer our readers to the said pamphlet and limit ourselves to pointing out, in a few words, the course followed by the storm from the time when it appeared southeast of the Loochoos, August 29, until it penetrated into Indo China, on September 5.

From August 29 until the night of September 1, the typhoon advanced toward W by N, the center being about 60 miles north of Formosa by midnight of September 1 to 2. During the 2d, the storm took a southwesterly direction, passing through Formosa Channel, along the Chinese coast. On reaching latitude 24° north, its path suffered a deflection toward west, but scarcely had the vortex entered the continent, when it resumed its southwesterly course as far as Hainan Island. The successive veering of the wind from the fourth quadrant to the first and second, observed at the Lamko light-house, proves conclusively that the center crossed Hainan, passing south of the light-house in the afternoon of September 4. Thereafter the storm traversed the Gulf of Tongking and penetrated into Indo China in the evening of the 5th.

APPROXIMATE TRACKS OF THE TYPHOONS AND DEPRESSIONS OF SEPTEMBER, 1910.

Typhoons

Depressions

100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150°

35° 30° 25° 20° 15° 10°

WHANG-HAI OR YELLOW SEA

KOREA

JAPAN

NIPPON

KIU-SIU

TUNG-HAI OR EASTERN SEA

BONIN ISLANDS

LIU KIU OR LOO-CHOO ISLANDS

METACO-SIMA GROUP

FORMOSA

BASHI CHANNEL

BALINTANG CHANNEL

Lamko Light

HAINAN

I N D O C H I N A

CHINA SEA

GULF OF SIAM

PHILIPPINE ISLANDS

PACIFIC OCEAN

MARIANAS OR LADRONES ISLANDS

GUAM

YAP

WESTERN CAROLINE ISLANDS

PELEW GROUP

SULU SEA

MINDANAO

BORNEO

MINDORO

PANAY

NEGROS

SAMAR

LUZON

MANILA BAY

Aug. 29-30th

Sept. 1st, 6a.m.

Oct. 1st, 6a.m.

UofM MoU

THE TYPHOON OF THE LOOCHOOS ISLANDS, SEPTEMBER 3 TO 9, 1910.

For several days after the preceding storm had passed through the south of the Loochoos group, weather conditions continued to be so thoroughly complicated in the neighborhood of the said islands and over the Eastern Sea, that we consider it a hopeless task to attempt to ascertain the number of cyclonic centers which made their appearance in that region, and still more so to try to give their tracks. On one day, Tokyo Observatory, in its weather maps, assumed that there existed three storm centers over the eastern part of the Eastern Sea; that is to say, west of the Loochoos Islands, between Formosa and Japan. Zikawei, on the contrary ("Storms in September, 1910"), supposes that there existed only one center which, after having traveled northward as far as 29° latitude north, turned back toward south on the 2d and 3d, until it reached 26° north, when it once more advanced northward, in the direction of the Strait of Korea, on the 4th and 5th.

In the midst of such confusion, and without sufficient data to shed new light on the question, we content ourselves with saying a few words on the last typhoon belonging to this period, so stormy for the Loochoos Islands. The well-determined track of this disturbance is likewise shown on Plate X. This typhoon made its appearance on the 3d to the southeast of the Meiacosima group. During the night of September 5 to 6 it was between Naha and Ishigakijima, about equidistant from both stations. Following its course toward N by E, it arrived off the southwestern end of Japan in the afternoon of the 7th, and crossed Kiusku Island during the night in a northeasterly direction. On emerging from Kiusiu, the storm advanced almost due east and entered the Pacific Ocean on September 9.

THE DEPRESSIONS OVER THE CHINA SEA, SEPTEMBER 14 TO 25, 1910.

Prescinding from one or two depressions which seem to have existed over the China Sea on September 6, 7, 8, and 9, but were not sufficiently well defined to enable us to trace their paths, we shall discuss only three others, which succeeded each other over the said sea from September 14 or 15 to 25. All of these were of little importance.

The first depression under discussion formed probably September 14 to 15 to the west of Palawan Island, not far from the one hundred and fifteenth meridian east. It moved almost exactly west, and on the afternoon of the 17th it was already over the continent, in southern Indo China.

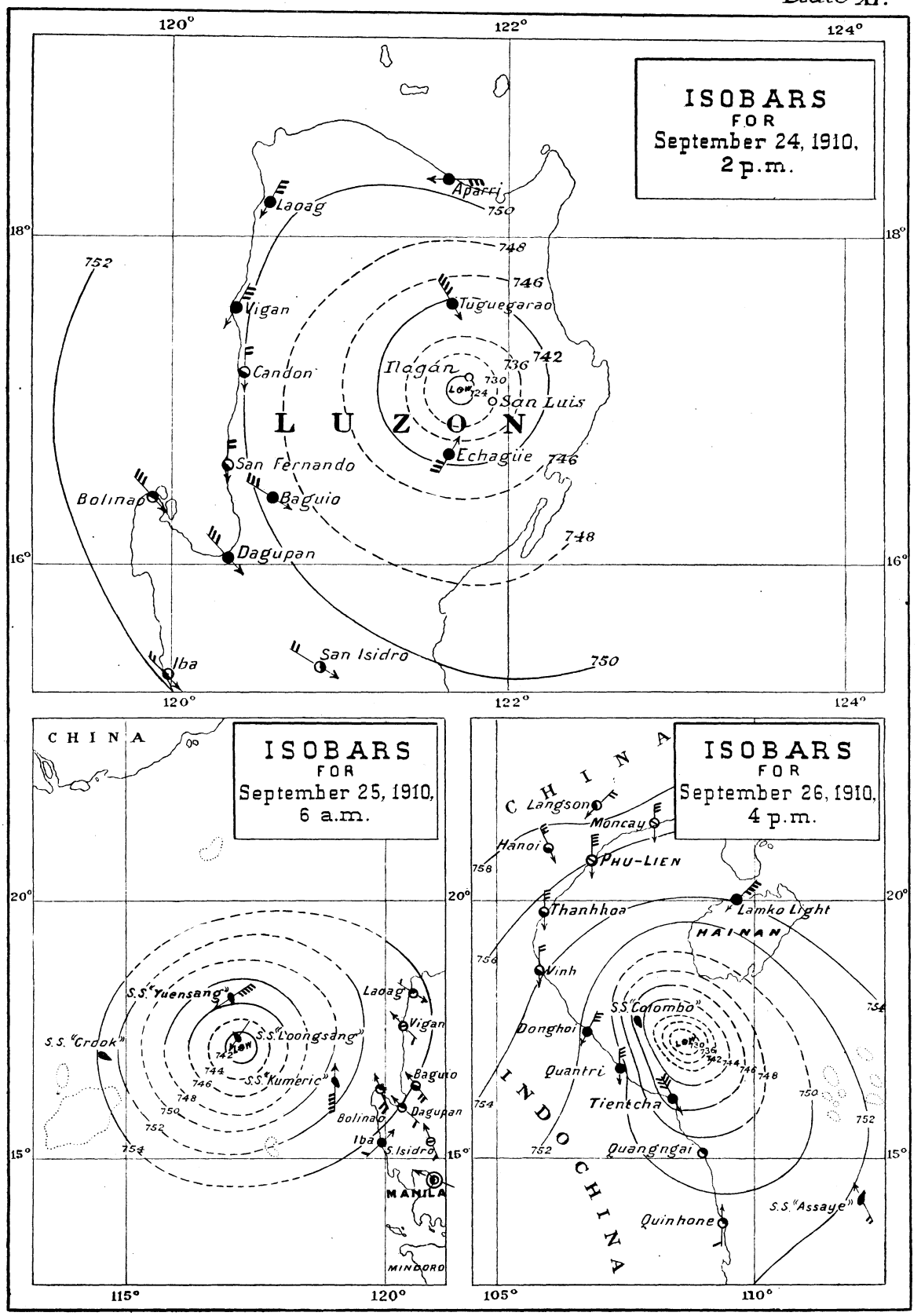
The other two depressions revealed themselves south of Hainan, one on the 18th, the other on the 24th. The former moved northwestward and penetrated into Indo China on the 20th; the latter took a west-northwesterly direction and entered Indo China on the 25th. It is probable that both originated at a greater distance from Indo China, in the central portion of the China Sea; but the data on hand are not sufficient to warrant us in asserting it.

THE "COLOMBO" TYPHOON, SEPTEMBER 23 TO 26, 1910.

This typhoon must have originated in the broad expanse of the Pacific Ocean lying between the Ladrones and Philippine Islands; but when and at what distance from our Archipelago it formed we are unable to determine. It is, however, certain that from the very beginning the storm moved so much inclined to west and so rapidly that no certain signs of its existence were noticed in the Philippines until the morning of the 24th. On similar occasions it may be said that we are without outlying stations toward the Pacific, as it is an established fact that, whenever there is question of typhoons which, moving directly westward, present themselves east of northern Luzon, our stations in southeastern Luzon and the eastern Visayas begin to feel their influence at almost the same time as Manila and the other stations in central and northern Luzon.

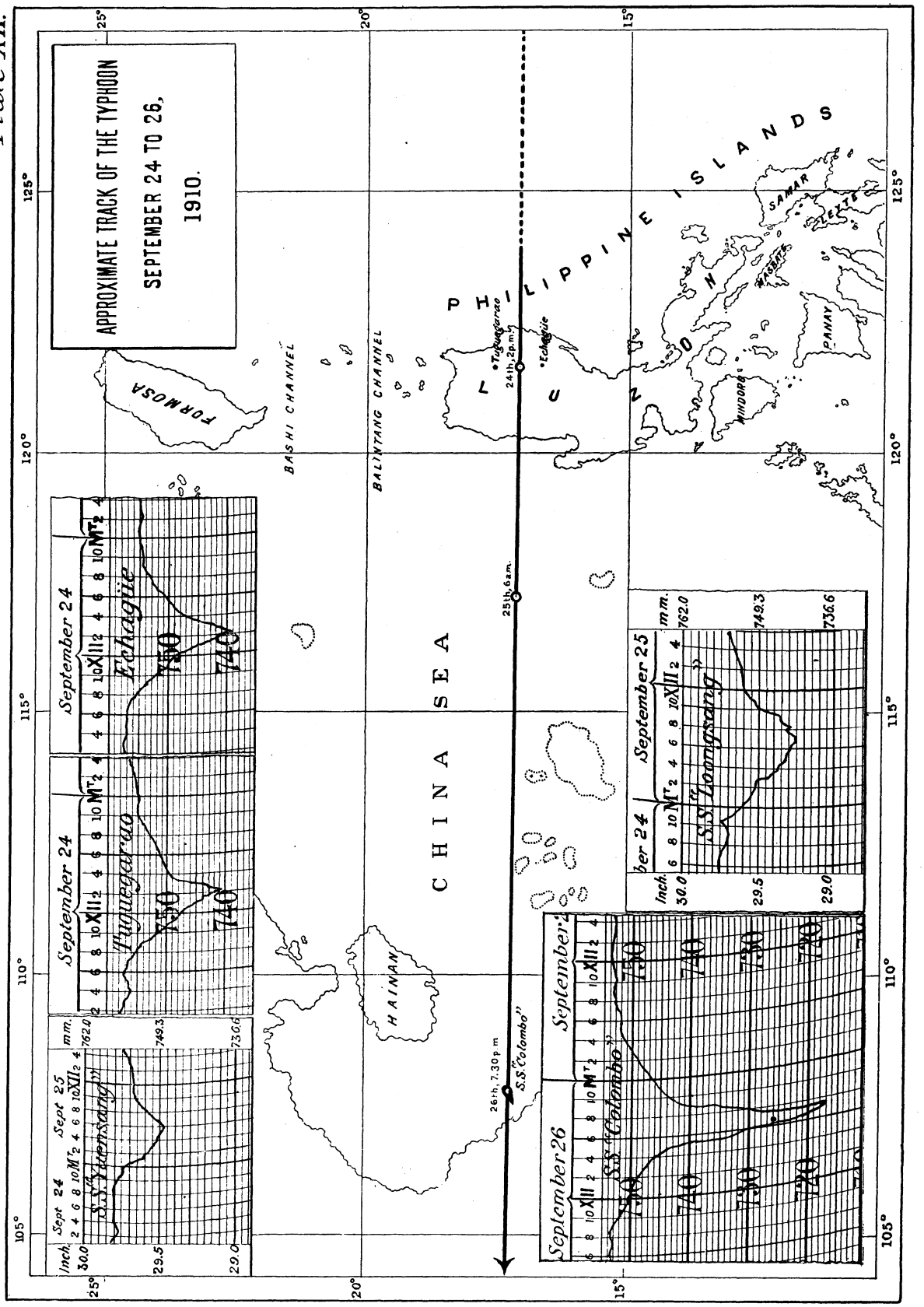
The Observatory sent its first warnings during the forenoon of the 24th, that is, after a sufficient number of observations had arrived to permit of tracing the isobars for 6 a. m. on the weather map. But the typhoon advanced with so great velocity that at 2 p. m. of the same day its vortex was already in Isabela Province, as our readers may see by consulting Plate XI, on which is shown the distribution of isobars over northern Luzon at the hour stated.

Plate XI.



N. B.-The barometric readings have been reduced to standard gravity

Plate XII.


APPROXIMATE TRACK OF THE TYPHOON
SEPTEMBER 24 TO 26,
1910.
FORMOSA
BASHI CHANNEL
BALINTANG CHANNEL
PHILIPPINE ISLANDS
LUZON
SAMAR
LEYTE
MASBATE
PANAY
MINDORO
CHINA SEA
HAINAN
24th, 2p.m.
25th, 6a.m.
26th, 7.30p.m.
S.S. "Colombo"
Tuguegarao
Echague
September 24
September 25
September 26
S.S. Tuguegarao
S.S. Echague
S.S. Tsientsang
S.S. Colombo
mm.
inch.
760
750
740
730
762.0
749.3
736.6
30.0
29.5
29.0
105°
110°
115°
120°
125°
25°
20°
15°

According to informations which were kindly furnished to us by our distinguished friend Don Jose Rosales, general manager of the Tabacalera Company, this typhoon was one of the shortest, but worst storms which for many years raged in Isabela Province. On the San Luis Estate, which is owned by the said company, the barometer fell to 725 millimeters, the most violent squalls coming from the southwestern quadrant. The hurricane lasted from noon to 3.30 p. m.

The short duration of the destructive winds was due, partly to the relatively small body of the storm, and partly also to its great velocity of translation, which will be discussed further on.

We subjoin the typhoon notices sent on the 24th by Manila Observatory to the observatories of Tokyo, Zikawei, Taihoku, Hongkong. and Phulien:

September 24, 8.45 a. m.: Typhoon east of Luzon, more than 300 miles distant; direction unknown.
September 24, 11.30 a. m.: Typhoon east of Luzon, less than 300 miles distant; moving west.
September 24, 5 p. m.: Typhoon crossing northern Luzon; moving west or west-northwest.

There is no doubt that in the morning of the 24th the typhoon was already much nearer to Luzon than these notes supposed. The following is a special weather note which was given to the newspapers of the capital in the afternoon of the same day:

September 24, 5 p. m.: According to observations just received from northern Luzon, the typhoon is moving with a very extraordinary velocity. The center has already entered the Island and will probably reach the China Sea by to-night.

On the following day the ordinary weather note said:

September 25, 3 p. m.: The typhoon entered the China Sea yesterday afternoon and continues moving very rapidly westward.

On this same day we dispatched the following cablegram to Tokyo, Zikawei, Taihoku, Hongkong, and Phulien:

September 25, 9 a. m.: Typhoon over N China Sea, moving west.

The following two tables contain the observations made aboard the steamers *Loongsang, Kumeric, Crook,* and *Yuensang,* all of which experienced the fury of this typhoon on the 25th, while in the China Sea. We beg to express to the respective captains our gratitude for these observations, especially to Captains Wheeler and Rolfe who, in addition to their observations, placed at our disposal the curves of their Richard barographs. Reproductions of these barograms will be found on Plate XII.

METEOROLOGICAL OBSERVATIONS FOR SEPTEMBER 23 TO 26, 1910.

Day and hour.	Steamer "Loongsang" [captain, F. Wheeler].						Steamer "Kumeric" [captain, Geo. B. McGall].				
	Position.		Pressure.	Wind.		Remarks.	Position.		Pressure.	Wind, direction.	Remarks.
	Latitude N.	Longitude E.		Direction.	Force.		Latitude N.	Longitude E.			
	° ′	° ′	*mm.*		*0–12.*		° ′	° ′	*mm.*		
23d:											
8 p. m	Haycock.		758.18	NW	3	At 4.40 p. m. left Manila.			758.43	SE	Ship's position at noon 21° 43′ lat. N, 114° 43′ long. E; occasional rain squalls, and strong NE breeze.
Midnight	Off Capones.		58.43	N	4				58.18	SE	
24th:											
4 a. m	15 20	119 32	57.16	N		Lunar halo			57.92	SE	2.30 a. m. fierce squalls of wind and rain.
8 a. m	15 48	119 09	57.92						58.68	SE	
Noon	16 17	118 47	56.40	NNW		Solar halo	19 02	117 06	58.43	SE	Light breeze and S swell.
2 p. m									56.40	SW	Wind shifted to S after noon.
4 p. m	16 21	118 09	54.62	WNW					55.64	W	
8 p. m	16 53	117 46	55.13	NW	4–5				54.37	N	Overcast with rain.
11 p. m									51.57	NNW	NE swell; continuous lightning.
Midnight	17 27	117 25	54.37	NNW	6	1.23 a. m. hove to			48.78	NNW	
25th:											
2 a. m						SW course, full speed.			48.27	SE	Heavy rain squalls. Wind shifted suddenly to SE and hauled through S to SW and WSW.
3 a. m									48.02	SSE	
4 a. m	17 20?	117 13	(?)	N	5–6	NNW course			48.78	S	
5 a. m									51.32	WSW	

METEOROLOGICAL OBSERVATIONS FOR SEPTEMBER 23 TO 26, 1910—Continued.

Day and hour.	Steamer "Loongsang" [captain, F. Wheeler].						Steamer "Kumeric" [captain, Geo. B. McGall].				
	Position.		Pressure.	Wind.		Remarks.	Position.		Pressure.	Wind, direction.	Remarks.
	Latitude N.	Longitude E.		Direction.	Force.		Latitude N.	Longitude E.			
25th:	° ′	° ′	*mm.*		*0–12*		° ′	° ′	*mm.*		
6 a. m			43.44			Wind veered to NE by N, very light. Blue sky to N and overhead. 6.30 a. m. ½ speed.			53.35	S	Heavy squalls with huge NE swell. Strong gale backing again to SSE. High sea from SW.
8 a. m	17 28	117 07	44.97	Light airs	1–3	Calm and light airs			56.40	SSE	Toward noon weather clearing.
Noon	18 00	117 08	50.81	SEbyS	8	From 9 to noon SE wind of force 12 with heavy burst and fierce squalls. Hove to. 2.53 p. m. N ½ W course, ½ speed ahead. 5.50 p. m. N 32 W course, full ahead.	15 39	119 27	57.41	SSE	
4 p. m	18 30	116 54	53.60	SSE	5						
8 p. m	18 59	116 38	55.89	SEbyE							
26th:											
4 a. m	19 56	116 03	56.65	E	4						
Noon	20 40	115 40	58.68	NE	5–6						
4 p. m	21 07	115 23	58.18	NEbyN	7	At 1.34 a. m. next day arrived at Hongkong.					

Day and hour.	U. S. Army transport "Crook" [captain, F. Williams].				Steamer "Yuengsang" [captain, F. H. Rolfe].			
	Pressure.	Wind.		Remarks.	Pressure.	Wind.		Remarks.
		Direction.	Force.			Direction.	Force.	
23d:	*mm.*		*0–12*		*mm.*		*0–12*	
4 a. m	758.43	ENE	3	At midnight left Haifong; at 8 a. m. rainy.				
Noon	57.92	E	2	Ship's position, 19° 36′ lat. N, 107° 38′ long. E.				
4 p. m	56.91	NE	2	Cloudy with light Nly. and Ely. breezes.				
5.30 p. m.					757.16	EbyS	4	Left Hongkong, fine weather.
8 p. m	56.91	E	3	Coppery sunset with windy appearance.				
24th:								
4 a. m	55.89	SE	2	Barometers falling slowly				
Noon	56.14	SSE	4	Ship's position, 17° 32′ lat. N, 111° 09′ long. E.	57.67	ESE	4	Ship's position 20° 05′ lat. N, 115° 49′ long E; fine weather; slight southerly swell.
4 p. m	54.87	SW	3	Cloudy and overcast	55.13	SE	2	Fine weather.
8 p. m	56.14	SE	4	No moon sight possible and weather showing every sign of rapidly approaching change.	56.40	NE	3	Fine weather and slight SSW swell.
25th:								
2 a. m					52.59	NEbyN	4	Hove to in 18° 10′ lat. N, 117° long. E. Winds rising; passing rain squalls and thunderstorms from SE to E.
3 a. m					50.56	NNE	5	
4 a. m	55.38	Variable	1–2	Rain through the night	49.79	NE	6	
6 a. m	54.87	Variable	1–2	Smooth sea	48.52	ENE	8–10	Thunderstorms ceased; passing rain squalls, weather appears breaking.
7 a. m	54.37	N	3	Wind beginning to freshen from N		EbyN	8	
8 a. m	53.86	NNW	5	Strong breeze	50.30	E	8	Similar weather.
9 a. m	51.32	NW	7	Gale with lulls and squalls. Barometer falling very fast and sea rapidly rising.				
10 a. m	48.78	NW	7	Terrific typhoon swell commenced to come from NE with rapidly rising NW sea.	52.84	ESE	8	Ship proceeded SE by S with full speed, weather clearing.
11 a. m	47.25	WNW	7	Wind backing to W and carrying a nasty cross sea.				
Noon	45.73	WNW	7	Ship's position, 16° 54′ lat. N, 115° 49′ long. E.	53.10	ESE	8	Ship's position, 18° 06′ lat. N, 117° 28′ long. E. Strong breeze, light showers.
1 p. m	44.21	W	7	Heavy typhoon waves from NE; high cross NW to SW sea.				
2 p. m	44.71	WSW	8	2.30 p. m. Sea rising from S as wind backs to S. Ship altered course to S to ride the seas better and get away from typhoon which is passing N. At 7 p. m. sea moderating rapidly; put ship on her course for Manila, S 67° E true.				
3 p. m	47.00	SW	8					
4 p. m	48.02	SbyW	7					
6 p. m	51.83	SbyW	7					
8 p. m	53.10	SbyW	7					
Midnight	56.65	S	5		55.89	SE	6	Overcast, SSW swell.
26th:								
Noon	57.92	ESE	2	Ship's position, 15° 30′ lat. N, 118° 56′ long. E.	56.40	SE	3	Ship's position, 15° 11′ lat. N, 119° 30′ long. E. Fine weather. At 9.45 p. m. anchored in Manila Bay.
10 p. m	57.92	Calm		Ship's position, Mariveles				

The observations made on board the *Loongsang* have been very valuable for locating the position of the vortex at 6 a. m. of the 25th. (See Plate XI.) A comparison of this position with that at 2 p. m. of the 24th, already mentioned, shows that during the interval of sixteen hours the typhoon actually moved due west.

Thanks to the abundant material kindly placed at our disposal by M. G. Le Cadet, Director of Phulien Observatory, we have been so fortunate as to be able to determine the position of the vortex again with considerable accuracy for 7.30 p. m. of the 26th. We are especially grateful to M. Le Cadet for a copy of the barogram traced aboard the steamer *Colombo* of the Messageries Maritimes, which we reproduce on Plate XII. We have applied to this curve a correction of —5 millimeters, which resulted from a comparison between the barometer height indicated by it for 8 a. m. of the 26th and the observations made at the same hour by the meteorological stations on the coasts of Indo China. The *Colombo* left Tourane for the north at 0^h 30^m of the 26th, and found herself within the central calm of the typhoon at 7.30 p. m. of the same day, while in the neighborhood of 17° 15′ latitude north and 107° 50′ longitude east of Greenwich. According to the barogram mentioned, the barometric minimum was 717 millimeters. The violence of the hurricane and fury of the waves left the ship in such condition that the captain succeeded only after incredible efforts in reaching safety on Tiger Island on September 28.

If we compare the last position of the vortex, at 7.30 p. m. of the 26th, with that ascertained for 6 a. m. of the 25th, we will find that during the intervening thirty-eight hours the storm had preserved the same due westerly direction in which it traversed Luzon Island on the 24th.

In order to show the great velocity of translation which characterized this typhoon, we take the successive positions of the vortex at 2 p. m. of the 24th, 6 a. m. of the 25th, and 7.30 p. m. of the 26th. These were, respectively, 17° 5′ N and 121° 43′ E; 17° 8′ N and 117° 15′ E; and 17° 15′ N and 107° 50′ E. Hence we find that from 2 p. m. of the 24th to 6 a. m. of the 25th—that is to say, in sixteen hours—the storm traveled a distance of 256 nautical miles, or at the rate of 16 miles per hour.[1] Similarly it covered 540 nautical miles between 6 a. m. of the 25th and 7.30 p. m. of the 26th, or in thirty-seven and one-half hours, which gives an average velocity of 14.4 miles per hour. If we consider the entire length of the path traveled from 2 p. m. of the 24th until 7.30 p. m. of the 26th, we find that a distance of 796 nautical miles was traversed in fifty-three and one-half hours, at a mean velocity of 14.9 miles per hour.

During the typhoon, Hongkong Observatory favored us with the following notices:

September 24, noon: Typhoon east of Luzon, moving west.
September 25, noon: Typhoon northwest of Luzon, moving west-northwest.
September 26, noon: Typhoon near Paracels, moving west.

Zikawei Observatory, on its part, sent these warnings to the stations on the Chinese coast:

September 24, 10 a. m.: Typhoon far to the east of Philippine Islands; direction unknown.
September 24, noon: Typhoon east of Luzon, moving WNW or WbyN.
September 24, 9 p. m.: Typhoon in central Luzon, moving WNW or WbyN.
September 25, 11 a. m.: Typhoon northwest of Luzon, moving NWbyW or WNW.
September 25, 4.30 p. m.: Typhoon northeast of Paracels, moving WbyN or WNW.
September 26, 9 p. m.: Typhoon off Tourane (Annam), moving west.

THE TYPHOON OF THE BATANES ISLANDS, THE "WINGSANG," "POMPEY," AND "MOYUNE," SEPTEMBER 24 TO OCTOBER 3, 1910.

We give the above name to this typhoon because it crossed the Batanes group on September 28, passing at a short distance north of Santo Domingo, while the three steamers, *Wingsang, Pompey,* and *Moyune,* came to be successively within its vortex, or very close to it—the first mentioned at dawn of the 29th, the second in the afternoon of the same day, and the third in the early morning

[1] It must be remembered that for the sake of greater accuracy the distance is always computed by means of the formula:

$$\cos d = \sin \phi \cdot \sin \phi^1 + \cos \phi \cdot \cos \phi^1 \cdot \cos (\lambda - \lambda^1)$$

of the 30th. The United States Navy collier *Pompey* is the only ship whose pressure curve we can present to our readers. The original was kindly sent to us by the master of the vessel, Mr. James D. Smith, and is reproduced, together with the one obtained at Santo Domingo, on Plate XIII, where will be found likewise the entire track of this storm.

On this occasion was again shown the great importance of the station at Santo Domingo, Batanes Islands, for the study of typhoons. Without hesitation we may assert that outside of Manila Observatory nobody is in possession of sufficient data to enable him even to suspect the path pursued by this storm between the Batanes Islands, in the neighborhood of parallel 21° north, and the place where the vortex met the *Pompey,* near parallel 19° north. The clearly defined southwest direction followed by it during the night of September 28th and the morning of the 29th, we have not seen mentioned either by Hongkong Observatory or by those of Phulien, Zikawei, and Tokyo.

As to the origin of the storm, it may suffice to say that the same seems to have formed north of Yap, not far from parallel 14° north. This is deduced with a fair degree of probability from the observations made at our stations of Guam and Yap. During the 24th and a considerable part of the 25th, the storm must have moved with a strong inclination toward west; but on the 26th and 27th and in the morning of the 28th, it advanced toward northwest, probably increasing in development and intensity.

We insert here the cablegrams sent during those days by Manila Observatory to its foreign correspondents:

September 25, 5 p. m.: Typhoon east of the northern Visayas or southeastern Luzon, moving west or west-northwest.

September 26, 10 a. m.: Typhoon east of Luzon, more than 300 miles distant, inclining northward.

September 27, 9 a. m.: Typhoon east of northern Luzon, less than 300 miles distant, moving west-northwest or northwest.

September 27, 6.30 p. m.: Typhoon east of Balintang Channel, moving northwest or north-northwest.

September 28, 10 a. m.: Typhoon southeast of Formosa, moving northwest or north-northwest.

The observations made at Santo Domingo which are embodied in the following table, show clearly the passage of the storm across the Batanes group, north of Santo Domingo.

METEOROLOGICAL OBSERVATIONS MADE AT SANTO DOMINGO, BATANES ISLANDS, SEPTEMBER 27-29, 1910.

Date and hour.	Pressure.	Wind.		Lower clouds.		Weather.	State of the sea.	Rainfall (daily total).	Remarks.
		Direction.	Force.	Form.	Direction.				
September 27:	*mm.*		*0-12.*					*mm.*	
6 a. m.	755.40	ENE	1	Cu.	ENE	c	L	------	Some showers from the E.
2 p. m.	54.01	NE	4	N.	NE	o	T	29.7	Showers and fresh winds from NE.
September 28:									
6 a. m.	49.72	NNW	3	N.	NNW	or	M	------	Fresh winds from NNW.
8 a. m.	49.23	NNW	4	N.	NWbyN	od	M	------	Do.
10 a. m.	47.88	NW	4	N.	NW	oq	M	------	Winds backing and increasing in force.
Noon	45.64	W	5	N.	W	oq	M	------	Strong winds from W.
1 p. m.	44.37	W	5	N.	WbyS	od	M	------	Do.
2 p. m.	43.69	SW	5	N.	SW	oq	M	------	Strong winds from SW.
3 p. m.	43.22	SW	6	N.	SW	oq	M	------	Do.
4 p. m.	43.58	SW	6	N.	SWbyS	oq	M	------	Do.
5 p. m.	44.29	SSW	5	N.	SSW	oq	M	------	Strong winds from SSW.
6 p. m.	46.19	S	5	N.	SbyW	oqr	-----	------	Strong winds from S.
7 p. m.	47.12	S	4	N.	S	od	-----	------	Wind force decreasing.
8 p. m.	48.83	S	5	N.	----------	or	-----	------	Wind force increased again.
9 p. m.	49.73	S	3	N.	S	od	-----	------	Wind force decreasing.
10 p. m.	50.24	S	3	N.	S	od	-----	85.1	
September 29:									
6 a. m.	50.61	SSE	4	N.	SSE	o	L	------	
2 p. m.	51.07	SSE	3	N.	SSE	o	L	27.7	

From the foregoing observations it is clear that in the afternoon of the 28th the storm had changed its direction, moving now due westward. Manila Observatory advised the aforementioned foreign observatories of this change by sending the following cablegram:

September 28, 6.05 p. m.: Typhoon near or over Bashi Channel, inclining westward.

The extraordinary movements of the storm from the night of the 28th until the afternoon of the 29th can be followed with sufficiently close aproximation by means of the observations made on board the United States cruisers *New York* and *Albany,* the United States Navy colliers *Pompey* and *Nanshan,* the Portuguese cruiser *San Gabriel,* and the steamers *Wingsang, Tean,* and *Taming,* for which we are indebted to the respective captains. To enable the reader to follow for himself more easily the typhoon in its movement toward southwest, we not only publish on Plate XIV the distribution of isobars at 2 p. m. of the 28th and 2 p. m. of the 29th, but likewise give in the following table the valuable observations made on board the *Wingsang* and *Pompey.* With these data before him he will easily understand that the part of the typhoon's track assigned to September 29 on Plate XIII is perfectly justified.

METEOROLOGICAL OBSERVATIONS FOR SEPTEMBER 28 AND 29, 1910.

Day and hour.	Steamer "Pompey" [captain, Jas. D. Smith, N. A. S.].					Steamer "Wingsang" [captain, Lishman].				
	Course.	Pressure.	Wind. Direction.	Wind. Force.	Remarks.	Course.	Pressure.	Wind. Direction.	Wind. Force.	Remarks.
28th:		*mm.*		*0–12.*			*mm.*		*0–12.*	
4 a. m.	----------	756.65	N	3	Cloudy and smooth sea	----------	----------	----------	-----	
Noon	S 40° E	56.91	N	5	Ship's position, 22° 11′ lat. N, 114° 20′ long. E. Moderate long rolling swell.	----------	----------	----------	-----	Ship's position, 21° 59′ lat. N, 118° 11′ long. E.
4 p. m.	S 41° E	54.11	N	5	Overcast and gloomy, rough.	----------	----------	----------	-----	
Midnight	S 41° E	53.10	NNE	6	Confused sea.	----------	----------	----------	-----	
29th:										
1 a. m.	----------	----------	----------	-----	----------	S 17° E	747.76	NbyW	7–8	From 1 to 2 a. m. NNW wind of force 8 to 9.
4 a. m.	S 41° E	50.05	NEbyE	7	Stormy, rough confused sea.	S	38.36	NW	10	Wind hauled to NW, being at 5 a. m. of force 12.
6 a. m.	----------	49.54	NEbyN	7	----do----------	Variable	19.57	W	10	Between 6 and 7 a. m. wind lulled to light breeze and backed from NW to S.
7 a. m.	----------	49.03	----------	-----	----do----------	Variable	20.08	SW	12	
8 a. m.	S 41° E	49.03	N	8	Stormy, heavy squalls of wind and rain; heavy rough confused sea, and partly terrific high sea.	NE	29.73	S	12	
9 a. m.	----------	48.27	NbyW	8		NE	38.36	SE	-----	
10 a. m.	----------	46.49	NWbyW	8		NNE	41.67	SE	-----	
11 a. m.	----------	45.22	NW	8		SSW	43.95	SE	-----	
Noon	S 41° E	40.14	NW	10	Ship's position, 19° 19′ lat. N, 116° 57′ long. E. Hurricane with heavy squalls, rough confused sea. At 2.15 p. m. lowest barometric reading 719.31 mm. at 18° 56′ lat. N, 117° 24′ long. E.	SbyE	44.97	SE	5	Ship's position, 19° 29′ lat. N, 118° 02′ long. E.
1 p. m.	----------	33.03	WNW	12		S 30° E	----------	----------	-----	
2 p. m.	----------	23.63	SW	12		----------	45.22	SE	5–6	Frequent showers.
3 p. m.	----------	28.71	SW	12		S 18° E	----------	----------	-----	Do.
4 p. m.	S 41° E	35.06	S	11	Overcast, passing showers of light rain, wind moderating and barometer rising, rough confused sea.	S 18° E	45.48	SE	5–6	Do.
5 p. m.	----------	40.65	S	10		S 18° E	45.98	SE	4	Do.
6 p. m.	----------	43.19	S	9		----------	----------	----------	-----	
8 p. m.	S 41° E	46.75	S	8		S 18° E	48.02	SE	4	Do.
10 p. m.	----------	48.27	S	6	Occasional rain at times, weather improving and sea decreasing.	S 18° E	49.29	SE	4	Do.
Midnight	S 41° E	49.79	S	6		S 18° E	50.05	S	4	Ship's position at noon next day, 18° 34½′ lat. N, 119° 02′ long. E.

During the afternoon of the 29th, the storm resumed its exactly westward course. An evident proof of this is found in the fact that the steamer *Moyune* encountered the very center of the storm in the morning of the 30th, while approximately between meridians 114° and 115° east and about *on the same parallel on which had been the U. S. steamer Pompey at 2.15 p. m. of the preceding day,* that is, at the hour when the latter ship recorded the barometric minimum of 719.31 millimeters.

Plate XIII.

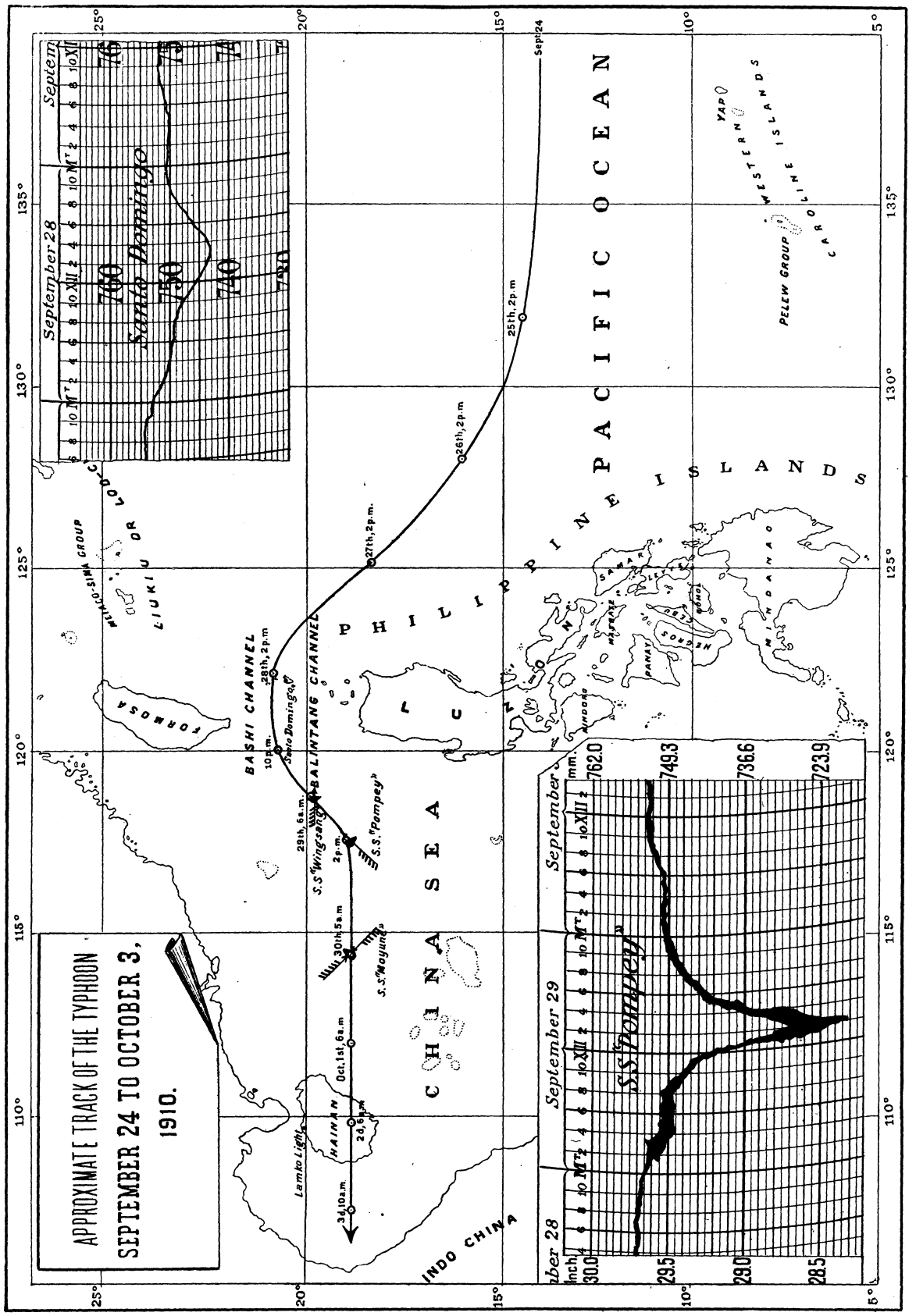
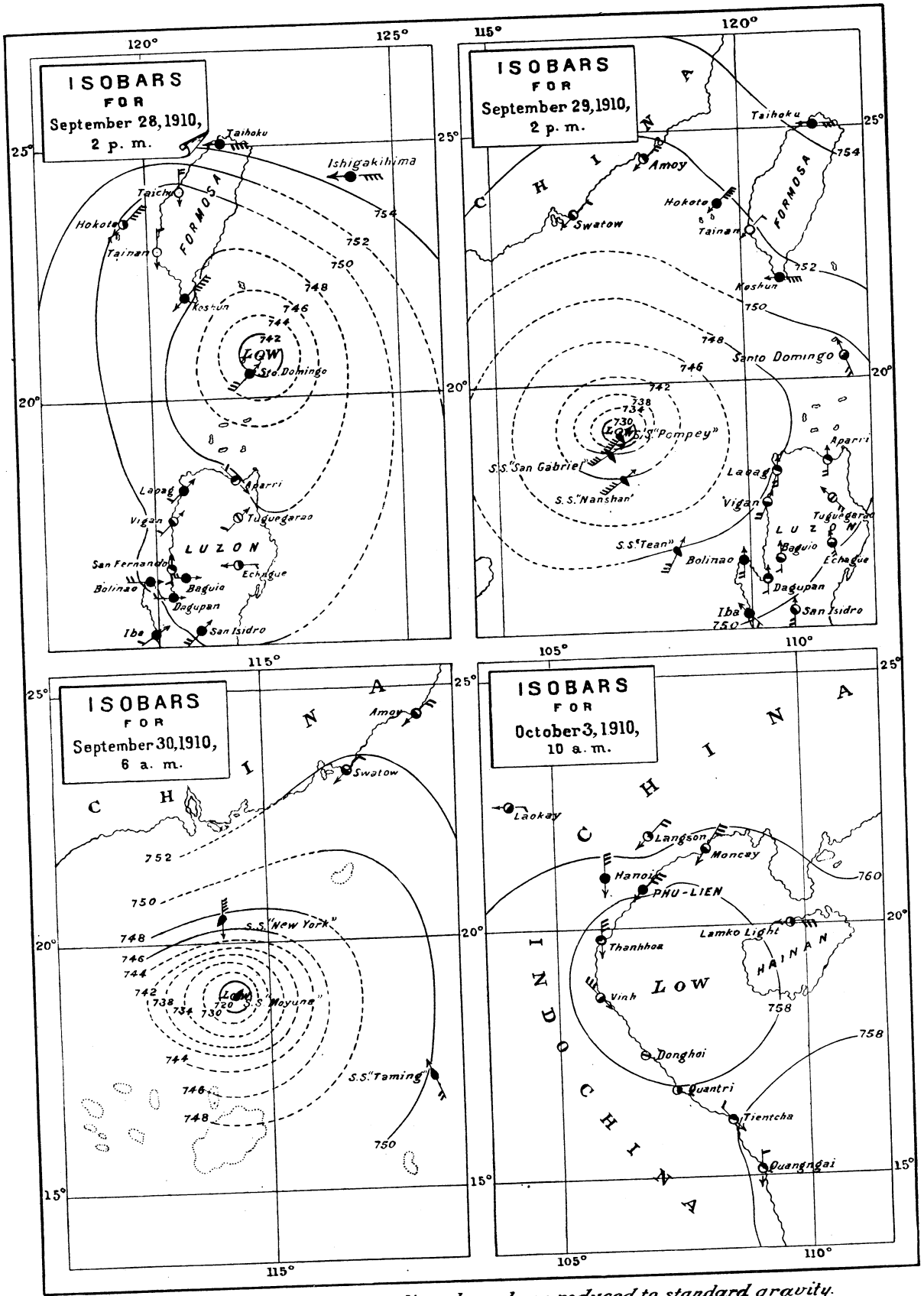

APPROXIMATE TRACK OF THE TYPHOON
SEPTEMBER 24 TO OCTOBER 3,
1910.
PACIFIC OCEAN
PHILIPPINE ISLANDS
CHINA SEA
LUZON
FORMOSA
BASHI CHANNEL
BALINTANG CHANNEL
LIUKIU OR LOOCHOO ISLANDS
PELEW GROUP
YAP
WESTERN CAROLINE ISLANDS
HAINAN
INDO CHINA
Lamto Light
Sept 24
25th, 2p.m
26th, 2p.m
27th, 2p.m.
28th, 2p.m
10p.m.
Santo Domingo
29th, 6a.m.
2p.m.
S.S. "Wingsang"
S.S. "Pompey"
S.S. "Nayuno"
30th, 5a.m
Oct. 1st, 6a.m
24, 5p.m
3d, 10a.m.
September 28
September 29
S.S. "Pompey"
mm.
762.0
749.3
736.6
723.9
Inch.
30.0
29.5
29.0
28.5
760
750
740
730
Santo Domingo

Plate XIV.



N. B: The barometric readings have been reduced to standard gravity.

The observations made on board the steamer *Moyune* have been taken from Fr. Froc's pamphlet "The Storms in September, 1910." They are given in the following table, together with those of the United States cruiser *Albany*. The barometric minimum observed on the *Moyune* was 713 millimeters, or 6 millimeters lower than that on the *Pompey*.

METEOROLOGICAL OBSERVATIONS FOR SEPTEMBER 28 TO OCTOBER 1, 1910.

Day and hour.	Steamer "Moyune" [captain, J. Kiley].						U. S. cruiser "Albany" [captain, C. S. Williams, U. S. N.].					
	Position.		Pressure.	Wind.		Remarks.	Position.		Pressure.	Wind.		Remarks.
	Latitude N.	Longitude E.		Direction.	Force.		Latitude N.	Longitude E.		Direction.	Force.	
	° ′	° ′	*mm.*		*0–12*		° ′	° ′	*mm.*		*0–12*	
28th:												
Noon	15 33	113 6	751.32	NW	6	Squally; wind increasing.						
29th:												
8 a. m.	17 40	114 2	50.56	NNW	9	do						
Noon							22 15	114 45	754.62	NbyE	3	Overcast.
3 p. m.	18 50	114 20	49.29	NNW	12	Hove to; gale; incessant rain.						
8 p. m.	18 55	114 21	43.70	NNW	12	do	21 22	114 28	52.08	NNE	7	Do.
Midnight	18 55	114 21	35.82	NW	12	do						
30th:												
4 a. m.	18 55	114 21	20.58	NW	12	do						
5 a. m.	18 55	114 21	12.97	SE	12	Calm, then SE hurricane.						
7 a. m.	18 55	114 21	30.74	SE	12							
8 a. m.							20 34	113 20	49.79	N	8	Overcast and misty and at 10 a. m. hove to.
Noon	18 55	114 21	42.43	SSE	9		20 20	113 00	48.27	NNE	9	
4 p. m.									47.25	NNE	9–11	
8 p. m.							20 00	113 00	49.79			Overcast and rainy.
1st:												
8 a. m.									53.86	NNE	5	Wind dropped and shifted to E after daylight. Barometer rising.
Noon	21 40	116 3	53.86	NE	10	Heavy seas						

The observations received from Lamko light-house and northern Indo China indicate that there still existed a depression over the southern part of Hainan in the morning of October 2, and over the Gulf of Tongking in the morning of the 3d. We say a *depression,* because the typhoon did not preserve its perfect development beyond September 30, and after that date it weakened and filled up gradually.

On the 29th and 30th, Manila Observatory sent out the following two typhoon warnings:

September 29, 8.45 a. m.: Typhoon west of Balintang Channel, moving west.
September 30, 11.45 a. m.: Typhoon west of Balintang Channel, filling up.

Relative to the same typhoon, the following notices were received from Hongkong Observatory:

September 27, 10.40 a. m.: Typhoon northeast of Luzon, moving northwest.
September 28, noon: Typhoon southeast of Formosa, moving northwest.
September 28, 5.30 p. m.: Typhoon near Bashi Channel, moving west-northwest.
September 29, 10.30 a. m.: Typhoon west of Balintang Channel, moving west.
September 30, noon: Typhoon south-southeast of Hongkong, moving west.

Zikawei Observatory kept the stations on the Chinese coast informed of the progress of the storm by means of the following warnings:

September 26, 11.30 a. m.: Typhoon south of Loochoo Islands, moving northwest.
September 27, 9.45 a. m.: Typhoon southeast of Meiacosima group, moving northwest.
September 27, 4.40 p. m.: Typhoon east of Formosa, moving northwest.
September 28, 4.30 p. m.: Typhoon over Bashi Channel, moving northwest.
September 28, 9 p. m.: Typhoon over Bashi Channel, moving WNW or WbyN.

September 29, 8.25 a. m.: Typhoon southwest of Formosa, moving WNW or NWbyW.
September 29, 10 a. m.: Typhoon east of Pratas, S of Formosa Channel, moving WNW or NWbyW.
September 30, 10 a. m.: Typhoon east of Pratas, S of Formosa Channel, recurving.
October 1, 9 a. m.: Typhoon east of Pratas, S of Formosa Channel, filling up.

In concluding these notes on the last typhoon of September, 1910, we make use of the opportunity to express our profound gratitude to Admiral Hubbard, United States Navy, for the readiness wherewith he acceded to the request of the Director of the Weather Bureau and issued the necessary instructions to the commanders of the ships of the Third Squadron of the United States Pacific Fleet, which during the typhoon had been under way from Hongkong to Manila, to favor the Weather Bureau with copies of the observations made on board their respective vessels.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—La media presión atmosférica mensual difiere muy poco así de la normal de este mes como de la media de Septiembre, 1909. La de Manila v. gr. se diferencia de la normal en —0.27 mm., y de la media mensual del año pasado en +0.03 mm. Las más altas presiones del mes se observaron en todas las estaciones el día 18, y las más bajas, el día 28 ó el 29.

La temperatura media mensual resulta ó idéntica ó ligeramente inferior á la de Septiembre, 1909. La máxima y mínima absolutas para Manila fueron 33.7°C. y 22.4°C., habiendo sido registradas los días 8 y 7 respectivamente.

Precipitación acuosa.—Sólo diez estaciones nos dan este mes un total de lluvia inferior al del año pasado. La cantidad de agua recogida en los pluviómetros del Observatorio Central supera á la normal en 133.0 mm., y al total de Septiembre del año pasado en 140.8 mm.

DEPRESIONES Y TIFONES.

Este mes ha sido muy abundante en perturbaciones atmosféricas, distinguiéndose principalmente dos períodos: uno en la primera semana del mes y otro en la última semana. El primer período fué muy tormentoso para las Islas Liukiu y el Mar del Este, y el segundo para la parte norte de Filipinas. Vamos á decir algo sobre cada una de estas perturbaciones.

EL TIFÓN DEL CANAL DE FORMOSA, 29 DE AGOSTO Á 5 DE SEPTIEMBRE, 1910.

Este tifón fué verdaderamente muy singular y anormal en su trayectoria la cual damos en la lámina X. El P. Froc, Director del Observatorio de Zikawei, en un folleto titulado "Storms in September, 1910" ha publicado con muchos detalles la parte más importante y más extraordinaria de esta trayectoria á través del Canal de Formosa, y juntamente abundancia de datos para comprobarla. Remitimos á nuestros lectores á dicho folleto, y así nos contentaremos con indicar en pocas palabras el curso seguido por este tifón desde que apareció al SE de las Islas Liukiu el 29 de Agosto hasta que penetró en Indochina el 5 de Septiembre.

Desde el 29 de Agosto hasta la noche del 1.º de Septiembre se movió el baguio al W ¼ NW, viniendo á hallarse el vórtice á media noche del día 1.º á unas 60 millas de distancia al N de Formosa. Durante el día 2 se dirigió al SW, recorriendo el Canal de Formosa á lo largo de la costa de China. Al llegar á los 24° Lat. N. sufrió la trayectoria una inflexión al W: pero una vez hubo penetrado el vórtice en el Continente emprendió de nuevo su marcha al SW hasta llegar á la Isla de Hainán, la cual atravesó pasando por el sur del Faro Lamko la tarde del día 4, según lo indica claramente el role de vientos allí observado del cuarto al primero y segundo cuadrante sucesivamente. Por fin, el baguio atravesó el golfo de Tongking en dirección al W y penetró en Indochina la tarde del día 5.

EL TIFÓN DE LAS ISLAS LIUKIU, 3 Á 9 DE SEPTIEMBRE, 1910.

Desde que el tifón anterior hubo pasado por la parte sur de las Islas Liukiu, continuaron las condiciones atmosféricas tan revueltas por espacio de varios días en las cercanías de dichas islas y en el Mar del Este que nos parece poco menos que imposible precisar el número de centros ciclónicos que allí aparecieron y mucho menos dar sus trayectorias. Día hubo en que el Observatorio de Tokio supuso en los mapas del tiempo que existían tres centros en la parte oriental del Mar del Este, ó sea, al oeste de las Islas Liukiu entre Formosa y Japón. En cambio el Observatorio de Zikawei ("Storms in September, 1910") supone que un solo centro después de haber subido hasta los 29° Lat. N. volvió atrás hacia el S durante los días 2 y 3 hasta que al llegar á los 26° Lat. N. subió otra vez al N los días 4 y 5 en dirección al estrecho de Korea.

En medio de tanta confusión y no contando con bastantes datos para aclarar este punto diremos sólo dos palabras sobre el último tifón de este período tormentoso de las Islas Liukiu, cuya trayectoria por cierto bién definida va incluída en la lámina X. Este tifón apareció el día 3 al SE del grupo de Meiacosima; se hallaba entre Naha é Ishigakijima y próximamente á igual distancia de entrambas estaciones la noche del 5 al 6; y, siguiendo su curso al N $\frac{1}{4}$ NE, llegó al SW del Japón la tarde del 7 y atravesó la Isla Kiusiu en dirección al NE durante la noche del 7 al 8. Al abandonar la Isla Kiusiu se movió el baguio casi exactamente al E entrando en el Pacífico el día 9.

LAS DEPRESIONES DEL MAR DE CHINA, 14 Á 25 DE SEPTIEMBRE, 1910.

Prescindiremos aquí de una ó dos depresiones que parece existieron en el Mar de China durante los días 6, 7, 8 y 9, por no ser bastante definidas para poder trazar sus trayectorias. Indicaremos solamente otras tres que se sucedieron unas á otras en dicho Mar de China desde el 14 ó 15 hasta el 25. Todas fueron de poca importancia.

La primera se formó probablemente del 14 al 15 al W de la Isla Palawan no lejos de 115° Long. E. Movióse casi al W, y la tarde del 17 se hallaba ya dentro del Continente en la parte sur de Indochina.

Las otras dos se hallaban al sur de Hainán, la una el 18, y la otra el 24: aquélla se movió al NW. y penetró en Indochina el 20; ésta se dirigió al WNW y entró en Indochina el 25. Probablemente ambas se habían formado más lejos de Indochina en la parte central del Mar de China: mas los datos que tenemos no son suficientes para asegurarlo.

EL BAGUIO DEL "COLOMBO," 23 Á 26 DE SEPTIEMBRE, 1910.

Este baguio hubo de formarse en la grande extensión del Pacífico que media entre las Islas Ladrones y Filipinas. Mas cuándo y á qué distancia de Filipinas se formó es imposible determinarlo. Lo cierto es que se movía ya desde un principio tan inclinado al oeste y con tanta rapidez, que no se notaron en Filipinas señales ciertas de su existencia hasta la madrugada del 24. En casos como este puede decirse que carecemos de estaciones avanzadas hacia el Pacífico: pues es un hecho averiguado que, tratándose de baguios que se presentan al este del norte de Luzón moviéndose directamente al oeste, las estaciones del sudeste de Luzón y de las Visayas Orientales empiezan á sentir su influencia casi al mismo tiempo que Manila y las otras estaciones del centro y norte de Luzón.

El Observatorio envió sus primeros avisos de tifón la mañana del 24, ó sea, en cuanto llegaron suficiente número de observaciones para trazar en el mapa del tiempo las isobaras de 6 a. m. Pero el tifón avanzaba con tanta velocidad, que á 2 p. m. del mismo día se hallaba ya el vórtice dentro de la provincia de La Isabela, según podrán ver nuestros lectores en la lámina XI donde damos la distribución de isobaras en aquella hora en el norte de Luzón.

Según informes que agradecemos á nuestro distinguido amigo D. José Rosales, Administrador General de la Compañía General de Tabacos de Filipinas, fué este baguio uno de los más cortos pero más duros que han desfogado en la provincia de La Isabela desde hace muchos años. El barómetro de la Hacienda de San Luis perteneciente á dicha Compañía bajó hasta 725 mm. siendo las rachas más violentas del cuadrante del SW. La violencia del huracán duró desde las 12 mediodía hasta las 3.30 p. m.

La poca duración de los vientos destructores fué debida parte á la extensión relativamente pequeña del cuerpo de este baguio y parte también á su gran velocidad de traslación de que hablaremos más abajo.

Véanse á continuación los avisos de tifón enviados el día 24 por el Observatorio de Manila á los Observatorios de Tokio, Zikawei, Taihoku, Hongkong y Phulien.

Día 24, 8.45 a. m.: Tifón al E de Luzón, distancia mayor de 300 millas; dirección desconocida.
Día 24, 11.30 a. m.: Tifón al E de Luzón, distancia menor de 300 millas, moviéndose al W.
Día 24, 5 p. m.: Tifón cruzando la parte norte de Luzón, moviéndose al W ó WNW.

No cabe la menor duda que el tifón se hallaba por la mañana del 24 mucho más cerca de Luzón de lo que suponían estos avisos del Observatorio. He ahí lo que decíamos en una nota extraordinaria enviada á los periódicos de la Capital la tarde del 24:

Día 24, 5 p. m.: Según observaciones que se acaban de recibir del norte de Luzón, el tifón se mueve con una velocidad muy extraordinaria. El vórtice ha entrado ya en la Isla, y probablemente llegará al Mar de China esta noche.

Y el día siguiente se decía lo siguiente en la nota ordinaria del tiempo:

El tifón entró en el Mar de China ayer tarde y continúa moviéndose muy rápidamente hacia el W.

Á Tokio, Zikawei, Taihoku, Hongkong y Phulien se trasmitió el 25 este cablegrama:

Día 25, 9 a. m.: Tifón en la parte norte del Mar de China moviéndose al W.

En el texto inglés incluímos en dos tablas las observaciones hechas á bordo de los vapores *Loongsang, Kumeric, Crook* y *Yuensang,* los cuales experimentaron el 25 la violencia de este tifón en el Mar de China. Agradecemos estas observaciones á los Capitanes respectivos de dichos barcos y muy especialmente damos las gracias al Capitán Wheeler y al Capitán Rolfe por haber puesto á nuestra disposición las curvas del barógrafo Richard, una copia de las cuales incluímos en la lámina XII.

Las observaciones del *Loongsang* nos han servido admirablemente para situar el vórtice á 6 a. m. del 25 (véase la lámina XI). Comparando esta posición del vórtice con la otra mencionada arriba de 2 p. m. del 24, se ve que efectivamente el tifón se movió exactamente al W durante este intervalo de 16 horas.

Afortunadamente nos ha sido posible situar de nuevo el vórtice con bastante exactitud á 7.30 p. m. del 26, gracias á la abundancia de datos que se ha dignado remitirnos M. G. Le Cadet, Director del Observatorio de Phulien. De una manera particular debemos agradecerle una copia de la curva barográfica obtenida á bordo del vapor *Colombo,* de las Mensajerías Marítimas, la cual verán nuestros lectores en la lámina XII. Hemos aplicado á esta curva una corrección de —5 mm. según resulta de la comparación de la altura indicada por ella á 8 a. m. del 26 con las observaciones barométricas hechas en dicha hora en las estaciones de la costa de Indochina. El *Colombo* salió de Tourane en dirección al N á $0^h\ 3^m$ del 26, y vino á encontrarse con la calma central del tifón á $7^h\ 30^m$ de la tarde del mismo día en los alrededores de 17° 15′ Lat. N. y 107° 50′ Long. E. de Greenwich. La mínima barométrica fué, según el barograma arriba indicado, 717 mm. La violencia del huracán y el ímpetu de las olas dejaron al barco tan mal parado que sólo después de increíbles esfuerzos logró el Capitán refugiarse en la Isla de Tigre el día 28.

De esta última posición del baguio á 7.30 p. m. del 26, comparada con la de 6 a. m. del 25, se deduce que, durante estas 38 horas conservó la misma dirección al W que tenía cuando atravesó la Isla de Luzón el 24.

Para ver ahora la mucha velocidad de traslación con que se movía este tifón, tomemos las tres posiciones del vórtice á 2 p. m. del 24, 6 a. m. del 25 y 7.30 p. m. del 26, las cuales fueron respectivamente: 17° 05′ Lat. N, 121° 43′ Long. E; 17° 08′ Lat. N, 117° 15′ Long. E; 17° 15′ Lat. N, 107° 50′ Long. E. Tenemos, pues, que el baguio recorrió de 2 p. m. del 24 á 6 a. m. del 25 una distancia de 256 millas náuticas[1] en 16 horas. De donde se sigue que se movía con una velocidad media de 16 millas por hora. Tenemos también que de 6 a. m. del 25 á 7.30 p. m. del 26 recorrió una distancia de 540 millas náuticas en $37\frac{1}{2}$ horas, ó sea, con una velocidad media de 14.4 millas por hora. Si tomamos todo el trayecto recorrido desde 2 p. m. del 24 hasta 7.30 p. m. del 26, tendremos una distancia total de 796 millas recorridas en $53\frac{1}{2}$ horas, ó sea, con una velocidad media de 14.9 millas por hora.

[1] Téngase presente que para obtener estas distancias con más exactitud, nos valemos siempre de la fórmula:

$$\cos d = \operatorname{sen}\phi\ \operatorname{sen}\phi^1 + \cos\phi\ \cos\phi^1\ \cos(\lambda - \lambda^1).$$

Véanse á continuación los telegramas con que nos favoreció durante este tifón el Director del Observatorio de Hongkong:

Día 24, 12 md.: Tifón al E de Luzón, moviéndose al W.
Día 25, 12 md.: Tifón al NW. de Luzón, moviéndose al WNW.
Día 26, 12 md.: Tifón cerca de Paracels, moviéndose al W.

Del Observatorio de Zikawei son los siguientes avisos de tifón trasmitidos á las estaciones de la costa de China:

Día 24, 10 a. m.: Tifón lejos al E de Filipinas: dirección desconocida.
Día 24, 12 md.: Tifón al E de Luzón, moviéndose al WNW ó W¼NW.
Día 24, 9 p. m.: Tifón en Luzón, moviéndose al WNW ó W¼NW.
Día 25, 11 a. m.: Tifón al NW de Luzón, moviéndose al NW¼W ó WNW.
Día 25, 4.30 p. m.: Tifón al NE de Paracels, moviéndose al W¼NW ó WNW.
Día 26, 9 p. m.: Tifón en frente de Tourane (Annam), moviéndose al W.

EL BAGUIO DE LAS ISLAS BATANES Y DEL "WINGSANG," "POMPEY" Y "MOYUNE," 24 DE SEPTIEMBRE Á 3 DE OCTUBRE, 1910.

Llamamos así á este baguio por haber atravesado en efecto las Islas Batanes pasando cerca por el norte de Santo Domingo el día 28 de Septiembre, y por haberse encontrado en el mismo vórtice ó muy cerca de él los tres vapores *Wingsang, Pompey* y *Moyune,* el primero al amanecer del 29, el segundo la tarde del mismo día 29, y el tercero la madrugada del 30. Sólo del vapor *Pompey* podemos presentar á nuestros lectores la curva barográfica tomada directamente del registro original que bondadosamente puso á nuestra disposición el Capitán Mr. James D. Smith. La incluímos, juntamente con la de Santo Domingo, en la lámina XIII donde damos toda la trayectoria de este tifón.

Para que de nuevo se vea la importancia que tiene para el estudio de tifones la estación de Santo Domingo, en las Islas Batanes, podemos con toda verdad asegurar que fuera del Observatorio de Manila no creemos que nadie esté en posesión de datos suficientes ni siquiera para sospechar la parte de la trayectoria de este tifón comprendida entre las Islas Batanes en los alrededores de 21° Lat. N y el punto en que se encontró el vórtice con el *Pompey* en las proximidades de 19° Lat. N. Esta dirección tan pronunciada al SW de este baguio durante la noche del 28 y mañana del 29 no la hallamos indicada hasta el presente ni por el Observatorio de Hongkong ni por los de Phulien, Zikawei ó Tokio.

Cuanto al origen de este baguio bastará decir que parece haberse formado al N de Yap, no lejos de 14° Lat. N. Así se puede deducir con bastante probabilidad de las observaciones hechas en nuestras estaciones de Guam y Yap. Durante el día 24 y buena parte del 25 se hubo de mover el baguio muy inclinado al W: pero el 26 y 27 y aún la mañana del 28 se dirigió al NW, aumentando probablemente en desarrollo é intensidad.

He ahí los telegramas que en estos días envió el Observatorio de Manila á Tokio, Zikawei, Taihoku, Hongkong y Phulien:

Día 25, 5 p: m.: Tifón al E de las Visayas septentrionales ó de la parte sudeste de Luzón, moviéndose al W ó WNW.
Día 26, 10 a. m.: Tifón al E de Luzón, distancia mayor de 300 millas; inclinándose al norte.
Día 27, 9 a. m.: Tifón al E de la parte norte de Luzón, distancia menor de 300 millas, moviéndose al WNW ó NW.
Día 27, 6.30 p. m.: Tifón al E del Canal de Balintang, moviéndose al NW ó NNW.
Día 28, 10 a. m.: Tifón al SE de Formosa, moviéndose al NW ó NNW.

El paso del tifón á través de las Islas Batanes por el N de Santo Domingo lo verán nuestros lectores con sólo fijarse en las observaciones hechas en aquella estación, las cuales damos en una tabla en el texto inglés. Estas observaciones indican claramente que el baguio había cambiado de dirección la tarde del 28, moviéndose entonces exactamente al W. El Observatorio de Manila avisó de este cambio de dirección á los Observatorios arriba mencionados con este cablegrama trasmitido la tarde del 28.

Día 28, 6.05 p. m.: Tifón en, ó cerca del Canal de Bashi, inclinándose al W.

El curso extraordinario seguido por este baguio desde la noche del 28 hasta la tarde del 29 puede ser seguido con bastante aproximación por medio de las observaciones hechas á bordo de los cruceros *New York, Albany* y *San Gabriel* y de los vapores *Pompey, Nanshan, Wingsang, Tean,* y *Taming,* las cuales agradecemos á sus respectivos Comandantes y Capitanes. Para que nuestros lectores puedan más fácilmente seguir por sí mismos este baguio en su movimiento de traslación hacia el SW no sólo damos en la lámina XIV la distribución de isobaras á 2 p. m. del 28 y 2 p. m. del 29, sino que además publicamos en una tabla las preciosas observaciones del *Wingsang* y del *Pompey.* Con estos datos á la vista fácilmente se comprenderá cuán justificada sea la parte de la trayectoria supuesta en la lámina XIII para el día 29.

Desde la tarde del 29 volvió el baguio á moverse exactamente al W. Esto lo prueba evidentemente el hecho de haberse encontrado el vapor *Moyune* en el centro mismo del tifón la madrugada del 30 cuando se hallaba próximamente entre 114° y 115° Long. E. y próximamente *en el mismo paralelo que el vapor Pompey á* 2^h 15^m *p. m. del día anterior,* ó sea á la hora de la mínima barométrica 719.31 mm.

Las observaciones hechas á bordo del vapor *Moyune* las tomamos del folleto del P. Froc, "Storms in September, 1910," y las incluímos en una tabla en el texto inglés juntamente con las del crucero *Albany.* La mínima barométrica observada en el *Moyune* fué 713 mm., es decir, seis milímetros más baja que la del *Pompey.*

Las observaciones del Faro Lamko y del norte de Indochina indican todavía la existencia de una depresión en el sur de Hainán la mañana del 2 de Octubre y en el golfo de Tongking la mañana del 3. Decimos *depresión* porque en efecto no parece que este baguio conservase su perfecto desarrollo más allá del 30 de Septiembre, sino que desde dicho día fué debilitándose y rellenando gradualmente.

El Observatorio de Manila envió estos dos avisos de tifón los días 29 y 30:

Día 29, 8.45 a. m.: Tifón al W del Canal de Balintang, moviéndose al W.
Día 30, 11.45 a. m.: Tifón al W del Canal de Balintang, deshaciéndose.

Del Observatorio de Hongkong se recibieron en Manila los siguientes telegramas referentes á este tifón:

Día 27, 10.40 a. m.: Tifón al NE de Luzón, moviéndose al NW.
Día 28, 12 md.: Tifón al SE de Formosa, moviéndose al NW.
Día 28, 5.30 p. m.: Tifón cerca del Canal de Bashi, moviéndose al WNW.
Día 29, 10.30 a. m.: Tifón al W del Canal de Balintang, moviéndose al W.
Día 30, 12 md.: Tifón al SSE de Hongkong, moviéndose al W.

El Observatorio de Zikawei trasmitió también los siguientes avisos de tifón á las estaciones de la costa de China.

Día 26, 11.30 a. m.: Tifón al S de las Islas Liukiu, moviéndose al NW.
Día 27, 9.45 a. m.: Tifón al SE de Meiacosima, moviéndose al NW.
Día 27, 4.40 p. m.: Tifón al E de Formosa, moviéndose al NW.
Día 28, 4.30 p. m.: Tifón en el Canal de Bashi, moviéndose al NW.
Día 28, 9 p. m.: Tifón en el Canal de Bashi, moviéndose al WNW ó W¼NW.
Día 29, 8.25 a. m.: Tifón al SW. de Formosa, moviéndose al WNW ó NW¼W.
Día 29, 10 a. m.: Tifón al E de Pratas, S del Canal de Formosa, moviéndose al WNW ó NW¼W.
Día 30, 10 a. m.: Tifón al E de Pratas, S del Canal de Formosa, recurvando.
Día 1 de Octubre, 9 a. m.: Tifón al E de Pratas, S del Canal de Formosa, rellenándose.

No podemos terminar estas notas sobre este último baguio de Septiembre, 1910, sin aprovechar esta ocasión para manifestar nuestro más profundo agradecimiento al Almirante Hubbard por la prontitud con que, accediendo á los deseos del Director del Weather Bureau, procuró dar las debidas instrucciones para que todos los Comandantes de los barcos de la Escuadra Asiática, que al tiempo de este baguio se hallaban en viaje de Hongkong á Manila, se sirviesen enviarnos copia de las observaciones hechas á bordo de los mismos.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	755.89	27.3	31.3	24	28.2	29	28.9	29	28.9	28.7	82.4	22.1	4.1	2.9
2	56.25	26.9	31.6	23.5	28.5	29.1	29	29	29	28.8	83.4	21.9	1.5	2.1
3	55.84	27	31.3	24.4	28	28.8	28.8	28.9	29	28.7	83.3	22	2.1	2
4	55.42	25.1	27.5	24.1	28	27.8	28.7	28.5	28.9	28.7	93.8	22.1	0	.7
5	55.53	25.6	29.5	23.7	27.2	27.8	28.3	28.2	28.9	28.7	88.2	21.4	1.1	1.6
6	55.44	25	28.9	23	27.2	27.5	28	28.1	28.9	28.7	92.2	21.7	.1	.9
7	55.86	26.9	31.7	22.4	27	28.2	28	28.1	28.9	28.8	83.3	21.8	2.7	2.5
8	57.46	27	33.7	24.2	28	29	28.1	28.3	28.9	28.8	84	22	1.3	1.8
9	58.61	26.1	32	22.7	28	29.1	28.3	28.6	28.8	28.8	89	22.4	1.1	1.5
10	58.52	25.4	30.1	22.8	28	28.3	28.4	28.7	28.7	28.8	90.7	21.7	1	.9
11	58.60	26.5	31.8	23.1	27.9	28.9	28.5	28.7	28.8	28.8	86.1	21.9	2.1	1.7
12	59.17	26.6	31.6	23.3	28	28.9	28.4	28.7	28.7	28.9	86.5	22.3	1.7	1.3
13	59.01	26.1	33	23.2	28	29	28.5	28.7	28.6	28.9	88.7	22.2	1.5	1.6
14	58.54	24.8	27.3	23.5	28.1	28	28.6	28.6	28.7	28.7	93.2	21.7	.2	.3
15	57.98	25.3	28.1	23.2	27.3	27.9	28.3	28.4	28.6	28.6	91.7	21.9	.5	.6
16	57.75	25.6	31.7	23.2	27.6	28	28.3	28.3	28.7	28.8	89.7	21.7	.9	1
17	59.27	26.1	31.7	23	27.7	28.8	28.2	28.4	28.7	28.7	87.8	21.9	1.8	1.5
18	60.39	26.7	32.5	23.1	27.9	29	28.4	28.7	28.6	28.5	86	22.1	2.2	2.1
19	59.56	25.6	31.8	23.2	28.1	29.1	28.6	28.8	28.7	28.7	89.2	21.6	1.3	1.5
20	57.97	25.9	31.3	23	28.1	28.9	28.5	28.6	28.7	28.7	88.5	21.8	.9	1.3
21	57.50	25.9	32.7	22.6	28.1	29	28.7	28.7	28.7	28.7	90.6	22.3	.7	1.3
22	58.75	26.3	31.5	23.1	28	28.9	28.6	28.6	28.6	28.7	84.5	21.3	1.9	1.9
23	58.97	26.4	33.1	22.6	28.1	29	28.7	28.7	28.7	28.7	83	21.1	2.5	1.9
24	55.87	26.7	29.8	23.6	28.2	28.6	28.7	28.6	28.7	28.8	84.3	21.9	2.7	2.5
25	56.69	26.6	31.6	23	27.8	28.8	28.6	28.6	28.7	28.7	84.4	21.7	2.9	2.1
26	56.97	26.3	31.2	23.8	28.1	29.2	28.6	28.6	28.7	28.8	87.4	22.1	1.5	1.5
27	55.63	26.8	31.2	23.2	28.2	29.1	28.7	28.7	28.7	28.8	86.1	22.5	2.7	2.7
28	53.90	25.9	30.4	24.3	28.2	28.5	28.7	28.7	28.6	28.6	90.2	22.4	.6	1.3
29	53.52	25.4	29.6	23.4	27.9	27.9	28.6	28.5	28.6	28.6	93.4	22.5	0	.9
30	56.13	26.6	31	23.1	27.5	28.3	28.2	28.6	28.6	28.7	84.6	21.7	2.6	2.1
Mean	757.23	26.1	31	23.3	27.9	28.6	28.5	28.6	28.7	28.7	87.5	21.9	1.5	1.6
Total													46.2	48
Departure from normal	—0.27	—0.8	+0.4	—0.3							+1.8	—0.6		

Date.	Wind.				Clouds.			Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction.				
						Upper.	Lower.			
		Km.	*Km.*		*0-10.*			*h.* *m.*	*mm.*	
1	SW quad	352	33	WSW	9.4	Ci.-S.	Cu. SW	1 50		≡° a.
2	WSW	437.5	29	WSW	9.1	Ci.-S.	N.	3 40	27.7	● a. p.
3	SW	586.5	40	WSW	9.8	Ci.-S.	Cu.-N. WSW	0 30	20.8	d a. ● p.
4	SW quad.	224.5	26	WSW	10	Ci.-S.	N. WSW	0 00	45.3	⊤° p. ● a. p.
5	SW quad.	446.5	38	SW	10	Ci.-S.	Cu.-N. WSW	0 20	28.2	● a. p.
6	SW quad.	297	34	SWbyW	10	Ci.-S.	Cu.-N. WSW	0 00	48.4	≡° a. ● a. p.
7	WSW	391	34	SW	7.2	A.-Cu. WSW	Cu. SSW	8 50	2.5	≡° a. ● p.
8	Variable	104	10.5	ESE	8.3	Ci.-S.	Cu. SE	5 10	10.2	≡° a. ⌐◪ ● p.
9	N quad.	131.5	19	WNW	8.8	Ci.-S.	Cu. E quad	4 50	39.1	≡° a. ⌐◪ ◟ ●² p.
10	SW, NNW	102	12	NbyW	9	Ci.-S.	Cu.	0 00	-------	≡° d° a.
11	SE quad.	112	12	SE	9	Ci.-S. NNE, NNW	Cu.	0 45	-------	≡° a.
12	W quad.	75	10	WSW	8.5	Ci.-S. ENE	Cu. E	0 00	-------	≡° a.
13	W quad.	95	14	NWquad.	8.6	Ci.-S.	Cu. SE	3 55	3.9	≡° a. ⊤° ● p.
14	N quad.	88.5	10.5	NNW	10	-------	Cu.-N N	0 00	13.9	≡° ● a. d p.
15	WNW	72	7.5	WNW	10	Ci.-S.	N.	0 00	3.3	d a.
16	Variable	77.5	13	ESE	9	Ci.-S.	Cu.-N. E	2 05	18.7	≡ a. ⌐◪ ● p.
17	SW quad.	135.5	12	W	9.3	Ci.-S. E	Cu.-N. SE	2 00	6.2	⌂ ≡° a. ⊤ ● p.
18	E, W quad	158	20	ENE	7.2	Ci.-S. ENE	Cu. SSE	7 55	18.6	≡° a. ⌐◪ ● p.
19	W quad.	169	27.5	NW	8.9	Ci.-S. ESE	Cu.	5 40	25.1	≡d° a. ⌐◪° ● p.
20	N quad.	111	13.5	NW	8.8	Ci.-S.	Cu.-N. SE	4 10	9.4	≡° a. ● a. p.
21	N quad.	107	19	NNW	9.1	Ci.	Cu.-N. S	3 55	31.3	≡° a. ● p.
22	ESE	200	17	ESE	9.1	Ci.-S.	Cu.-N. SW	1 50	17	≡° a. ⌐◪° ◟ ● p.
23	NW quad.	177	16	WNW	6	Ci. ESE	Cu.-N. E	6 25	.3	≡° a. ⌐◪ p° p.
24	SW quad.	406.5	38	WbyS	9.9	Ci.-S.	Cu.-N. W	0 00	.3	⌂ ≡° a. d p.
25	SW quad.	178	19	W	6.1	Ci.-S.	Cu. WSW	7 35	45.2	≡° ●² a. ⌐◪ ◟ p.
26	NE quad.	187.5	19	N	8.5	A.-Cu. NE	Cu.-N.	3 00	26.3	● a. ⌐◪ ●² p.
27	SW	369	33	SW	8.8	Ci.-S NE	Cu. W	3 25	1.5	≡° a. ◠ d° ● p.
28	SW quad.	550	37.5	SWbyW	9.9	A.-Cu.	Fr-N. WSW	0 55	20.4	◠° a. ● a. p.
29	S quad.	256	30	SW	9.3	Ci.-S.	Cu.-N. SW	2 15	33.2	● d a. p.
30	S quad.	273	24	SbyW	9.1	A.-Cu. SEbyS	Cu.-N. SW	5 40	2.3	d° ● p.
Mean		229	22.3		8.9			2 53		
Total								86 40	499.1	
Departure from normal		—38.8			+1.2			—51 24	+133	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3] Mean.	Maximum.	Minimum.	Relative humidity (mean).[3]	Wind.[3] Prevailing direction.	Force (mean).	Clouds.[3] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.08	28.8	32	26.7	70.7	SSW	2.2	8.8	Ci.-S.	Cu. SE	------	
2	56.33	29.1	32.9	26.7	69.3	SE	2.4	7	Ci.-S.	Cu.	------	
3	56.36	28.8	33.3	26.6	70.4	S quad.	2	7	Ci.-S. NE	Cu.-N. SE, SW	------	
4	56.10	28.8	34	25.5	72.4	SE	1.8	8.2	Ci.-S.	Cu. SE	------	
5	55.83	28.9	33.4	26.3	74.9	SE	1.2	9.2	A.-S.	Cu.-N. SW	------	
6	55.67	28.8	33	26.5	77.5	SE	1.4	9.2	Ci.-S.	Cu.-N. SW	------	
7	55.61	29.2	33	26.5	75.2	SE	1.6	7.4	Ci.-S.	Cu. SSE	------	☇ p.
8	56.78	27.8	32.8	24.7	80	S quad.	.8	9.6	A.-S.	Cu.-N. SW	------	d° p.
9	57.75	26.8	33	24.4	83.4	SE	1.2	9.4	----------	Cu.-N. SW, ESE	20.8	● a. ⌐◪ ☇ d° p.
10	57.80	26.8	30.5	23.5	81.5	SE	1.2	9	A.-S.	Cu.-N. SE, SW	23.4	●² p.
11	58.10	27.2	33.8	22.8	81	SE	1.4	8	Ci.-S.	Cu.-N. SE	------	
12	58.29	27.6	32.9	24.4	79.6	SE	1.8	8.8	Ci.-S.	Cu.-N. NE, ENE	------	d° a. ☇ p.
13	57.91	27.3	31.4	24.2	81.2	SE	1	9	A.-Cu., Ci.-S.	Cu.-N. Variable	3.6	⊤ d° a. ⌐◪ p.
14	57.73	27.3	32.5	23.6	81.2	SE	1.6	9.6	Ci.-S.	Cu.-N. NE, SW	3.8	d a.
15	57.60	26.7	31.2	24	81.5	SE	2	10	A.-Cu., A.-S.	Cu.-N., N. SW, E	19	d° a. ⌐◪ ● p.
16	57.57	25.6	30.6	22	85.8	NW, SW	1.2	10	Ci.-S., A.-Cu.	Cu.-N. WNW, SW	15.2	● a. p.
17	58.54	27.3	33.1	23.5	81.7	SE	1.6	8.2	A.-Cu., Ci.-S.	Cu.-N. SW	------	
18	59.24	27.3	32.1	25.2	79.5	SE	1.4	7.8	Ci.-S.	Cu.-N., Cu. NE	------	d° ⊤ a. ⌣ p.
19	58.50	27.5	32.1	23	80.8	Variable	1	9.2	Ci.-S. SE	Cu.-N. NE, NW	3.3	⌒ d° a. ● d p.
20	57.45	25.9	28.9	22.9	85.7	Variable	1.2	10	----------	N. NNE, S	39.1	● a. d° ● p.
21	57.52	27.3	32.6	23.4	81.4	SE	1.4	10	Ci.-S. SSW	Cu.-N. SSW, NW	1	● a.
22	58.01	27.5	33.9	23.5	80.8	SE	1	8.4	Ci.-S. SW	Cu.-N. SE, NW	------	
23	57.72	26.4	29.7	22.3	84.8	Variable	1.2	8	Ci.-S. SE	Cu. E	------	d° a. p. ⊤ p.
24	56.32	27.3	31.5	24.2	79.8	SE	1.4	9.6	Ci.-S.	Cu.-N., N. E, SE	.5	d a. ◯° ⌐◪ p.
25	55.85	27.4	31.8	24.5	80.4	SE	1.4	9.2	Ci.-S.	Cu. SW, NE	------	⌐◪ ☇ p.
26	56.52	27	30.4	24.7	80.2	SE, NE	1.6	9.6	Ci.-S. NNE	Cu.-N. SW	------	⌒ d° a. ☇ p.
27	56.41	27.3	30.3	25.1	75.6	WSW	2.8	9.2	A.-S. NW	Cu.-N. S	------	◯ a. ☇ p.
28	56.08	27.8	30.4	25.6	73.5	SW quad.	3.2	7.8	A.-Cu. SW	Cu.-N. W	------	
29	56.05	28.2	31.2	25.5	71.2	S quad.	2.6	7.6	Ci.-S.	Cu. SW, S	------	d° a.
30	57.32	28.8	33	25.5	68.3	S quad.	1.6	4.8	A.-Cu. E	Cu. SE, S	------	
Mean	757.10	27.6	32	24.6	78.3	----------	1.6	8.7	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	129.7	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.85	28.1	33.9	24.2	79	Variable	0.7	7.3	Ci.-S. NE	Cu. S	------	☇ a. p.
2	57.09	28.2	33.9	23.9	78.7	Variable	.7	5.5	Ci.-S. NE	Cu.-N. SW	------	☊° a. p. ∞ p.
3	57.03	28.1	34.1	24.2	76	SW quad.	1	6.8	Ci.-S. NE	Cu. SW	------	☊° a. ☇ p.
4	56.78	27.4	33.5	23.6	78	Variable	.7	7.7	Ci.-S. NE	Cu.-N.	------	☇ a. ∞ ☇² p.
5	56.83	27.4	32.2	23.7	80.2	S,NW	.8	7.7	Ci.-S. NE	Cu.-N. S	------	☇ a. ∞ p.
6	56.61	27.5	32.4	23.9	80.3	S	.8	6.2	Ci.-S. E	Cu.-N.	------	☊° a. p. ∞ p.
7	56.61	28.1	34	23.1	77.7	S quad.	1.2	4	Ci.-S. NE	Cu. SW	------	☊° a. ↘² p.
8	57.64	27.6	31.5	23.7	82.8	Variable	.5	6.2	Ci. NE	Cu.-N. SW	------	☇ ☊° a. ∞ ☇ ⊤ p.
9	58.26	27.4	32	23.6	83.3	S,NE	1	5.8	Ci.-S. E	Cu.-N. NW	27.2	☊°≡°a. ∞ ☇²●²p.
10	58.61	25.9	29.8	23.6	87.8	S	.2	8.8	A.-Cu. SE	Cu.-N.	8.2	☇ a. ● a. p.
11	58.60	27.3	32.2	22.9	80.8	E	1	7.5	Ci.-S. NW	Cu.-N.	8.1	☇ a.
12	58.74	26.9	30.4	24	84.5	E quad.	.8	9.5	Ci.-S. NE	Cu.-N.	1.5	●° a. ☊° p.
13	58.28	26.8	31.2	23.2	85.5	NW	.2	7	A.-Cu. E	Cu.-N. SE	------	☊² a. ∞ p.
14	58.41	26.5	30.1	23.2	86.2	Variable	.7	7	A.-Cu. NE	Cu.-N. SW	7.7	☋ a. d° ● p.
15	58.06	25	29.3	23.2	90.7	WSW	.3	8.7	Ci.-S., A.-Cu.	Cu.-N. W	8.9	● p.
16	57.96	25.5	31	21.9	87.8	S	.2	7.8	Ci.-S. NE	Cu.-N.	------	☊² a. ☊° p.
17	59.22	26.8	31.1	22.9	86	E,WNW	.3	3.3	Ci.	Cu.-N.	------	☊² ≡° a. ∞ ☊° p.
18	59.98	27.2	31	22.7	85.8	NE quad.	1	4.8	Ci.-S. SE	Cu. NE	------	☊² ≡° a. ∞ ☇ p.
19	58.89	26.3	30.1	23.8	87.8	Variable	.8	6.3	Ci.-S. SE	Cu.-N. NE	4.3	☊² ≡° a. d° p.
20	57.90	25.4	29.5	22.4	87.3	W	.2	10	Ci.-S. NE	Cu.-N. N	53.3	● a. p.
21	58.20	26.2	31	22.2	86.3	NE quad.	.5	7.8	A.-Cu. S	Cu.N. SSE	6.4	●°≡° a. ∞ ⌐◪ p.
22	58.56	26.8	31	22.3	85.3	WbyN, ENE	.3	5	Ci.-S.	Cu.-N.	------	☊² ≡° a. ∞ ☊° p.
23	57.98	26.8	30.2	23.1	85.4	Variable	.5	3.7	Ci., Ci.-S.	Cu.-N.	------	☊² ≡° a. ∞ ☊² p.
24	56.75	27.1	31.4	23.4	82.3	W	.7	7.8	Ci.-S.	Cu.-N. WNW	------	☊² ≡° a. ∞ ☇² p.
25	56.47	26.9	31.5	23.7	84	WSW	.8	9.3	A.-Cu. E	Cu.-N.	2.8	☊² a. ● ⌐◪ ☇² p.
26	56.64	26.2	30.6	23.2	88.3	SW quad.	.7	7.8	Ci.-S. NE	Cu.-N. W	68.8	●² a. p.
27	56.71	27	31.6	23.8	82.8	SW	1.5	9	A.-Cu. S	Fr.-N. SW	7.1	●² a. ●° p.
28	56.38	27.4	31.8	24.8	81.2	SW	1.5	8.8	Ci.-S. NE	Cu.-N. SW	------	● a.
29	56.57	27.6	32.8	23.7	78.8	Variable	.5	7.5	Ci.-S. NE	Cu. S	28	☊° a. ∞ ● p.
30	58.10	27.4	33.2	23.2	79	SW quad.	.7	5.3	Ci. N	Cu.-N. SW	------	☊² a. ∞ ☊° p.
Mean	757.69	27	31.6	23.4	83.3	----------	.7	7	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	232.3	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	756.72	27.8	31.4	24.5	71.2	SW	7.1	6.3	Ci.-S.	Cu. SW	------	≡° Ω a. ○ a. p.
2	57.01	27.9	32	24	71.8	SW	7.2	6	A.-Cu. N	Cu. SW	------	≡° Ω a. ↘ p.
3	56.83	26.9	31.5	24.6	74.7	SSW, WSW	7.4	4.7	Ci.-S.	Cu., Cu.-N. SW	------	Ω a. ⌐◪ p.
4	56.48	27.9	31.8	24.2	71.2	SW quad.	------	5.2	Ci.-S.	Cu. SW	------	≡° Ω a. ↘ a. p.
5	56.58	27.5	32	24.4	72.2	SW, SSW	6.8	6.7	Ci.-S. ENE	Cu., Cu.-N. SW	------	≡° a. ↙ a. p.
6	56.43	27.6	31.2	24.4	72.9	SW quad.	5.9	6.5	Ci.-S.	Cu. SW	------	≡° a. ○ a. p.
7	56.42	28	32	24	71.7	SSW, S	7.4	4	Ci.	Cu. SW	------	Ω a. ⌐◪ p.
8	57.56	27.4	31.4	24.5	72.3	E	5.9	6.8	Ci.-S. E	Cu.-N. ENE	63.5	≡° a. ↘ a. p.
9	58.23	26.8	31.1	22.6	80.1	E	7.3	6.7	Ci.-S.	cu., cu.-N. NNE, N	14.2	●² ⌐◪² ∩ a. ⌐◪ ↙ p.
10	58.34	25.9	29.5	23.3	88.1	S, WSW	4.2	8.3	Ci.-S. E	Cu.-N. NE	16.5	≡° ● a. ⌐◪ p.
11	58.55	27.4	31.9	23.6	76.2	S	6.1	6.5	Ci., Ci.-S.	Cu. ENE	20.1	● a. p. ⌐◪ p.
12	58.52	26.6	31.4	22.9	82.3	Variable	6.3	7.3	A.-Cu. NNE	cu., cu.-N. ENE, E	9.4	● a. p. ⌐◪ ↙ p.
13	58.16	26.5	30.5	23.9	84.9	SE	5.4	7.3	Ci.-S.	Cu.-N. NE	8.2	● a. p. ⌐◪ a. p.
14	58.21	25.9	30.8	23.5	84.5	SE	------	7.3	Ci., Ci.-S.	Cu., Cu.-N. ESE	11.9	≡° a. ● ⌐◪ a. p.
15	57.91	25.4	30	23	84.7	SSW	6.2	8.2	Ci.-S.	Cu., N. SSW	49.5	≡° ○ ●° a. ●² ⌐◪ p.
16	57.84	25.5	29.2	22.5	83.7	SW	5.7	7.3	Ci.-S.	Cu., Cu.-N. SW	2.5	≡° ●° a. ⌐◪ p.
17	58.98	26.9	31.1	23.5	79.7	S, SE	4.9	4.3	Ci., Ci.-S.	Cu. SW	.5	●° a. ⌐◪ p.
18	59.77	27.2	30.5	23.5	77.5	E	9.4	5.2	Ci., Ci.-S.	Cu. ENE	.5	●° a. ⌐◪ ↙ p.
19	58.75	27.3	31	24	75.3	NE quad.	5.5	6.2	Ci., Ci.-S.	Cu.-N. ENE	.3	Ω ↙ d a. ⌐◪ p.
20	57.73	25.2	29.9	22.9	86.7	SSW	6	7.7	Ci-S. E	Cu.-N. NNW	42.9	⌐◪ a. ⊤ p. ● a. p.
21	58	26.2	29.9	23.3	81.2	SW	7	8.2	Ci.-S.	Cu.-N. SSW	1	● a. p. ⌐◪ ↙ p.
22	58.54	26.7	31	22.6	76.8	Variable	5.9	4.5	Ci., Ci.-S.	Cu. E	------	≡° Ω² a. ⌐◪ ↙ p.
23	58.04	26.7	31	23.3	78.6	Variable	6.1	4.5	Ci., Ci.-S.	Cu. ENE	8.4	≡° Ω a. ● ⌐◪ ↙ p.
24	56.61	26.6	30.1	23.6	81.7	SW quad.	6.1	7.3	Ci.-S.	Cu., Cu.-N. WSW	3.3	≡° Ω ○ a. ● ⌐◪ p.
25	56.33	26	30.9	23.9	81.3	Variable	5.3	7.5	Ci.-S.	Cu., Cu.-N. SW	2.5	≡° ∪ a. ● ⌐◪ ↙ p.
26	56.77	24.7	29.5	22.7	85.3	SW	5.3	8.5	Ci.-S. E	N. W, WSW	41.7	Ω ⊐ a. ● ⌐◪ p.
27	56.65	25.8	29.8	22.4	82	SW quad.	9.1	8	Ci.-S.	Cu.-N. WSW	13.2	Ω Ω a. ● ⌐◪ p.
28	56.20	26.8	30	24.2	74.3	W quad.	12.2	6.8	Ci.-S., A.-Cu.	Cu. SW	1.5	Ω a. ●° p.
29	56.28	27.4	30.6	24.8	71.3	SW quad.	12.8	6.7	A.-Cu. W	Cu. SW	1	●° a. p.
30	57.89	27.2	31	23.9	75.3	SSW	7.7	4.3	Ci.	Cu. SSW	------	●° a.
Mean	757.54	26.7	30.8	23.6	78.3	----------	6.9	6.5	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	312.6	

ILOILO.

[ϕ=11° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	756.99	27.4	29.6	23.1	78.3	SW	12	8.7	Ci.-S., A.-Cu.	Cu.	9.2	● a.
2	57.22	28.1	30.5	25	79.5	SW	14.9	7.8	A.-Cu.	Cu. SW	4.1	● a.
3	57.06	27.8	30.5	24.3	79.5	SW	16.4	9.2	Ci.-S., A.-Cu.	Cu.	44.9	● a. p.
4	56.81	27	29.8	22.5	80.7	SW	15.5	9.7	A.-Cu.	Cu.	4.6	● a.
5	56.82	26.2	28.1	23.5	84.8	SW quad.	9.2	8.8	Ci.-S.	Cu. SW	10	● d a. ↙ p.
6	56.52	27.4	30.4	24.9	80.7	SW	10.6	8.8	Ci.-S.	Cu. SW	5.8	≡ a.
7	56.78	27.1	30	23.4	78.5	SW	11.4	8.2	Ci.	Cu.	------	● a. ↙ p.
8	57.98	26.7	29.9	23.4	82.6	SW	7.4	9.2	A.-Cu. E	Cu.	45.7	● a. ⌐◪ p.
9	58.63	26	31.1	23.8	84.7	Variable	3.7	8	A.-Cu. E	Cu.	.3	●° p.
10	58.56	25.9	30	23.4	84.5	Variable	5.1	9.2	Ci.-S., A.-Cu.	Cu.	1.5	● a.
11	58.49	26.8	29.6	24.3	82.5	SW	5.4	7.8	Ci.-S.	Cu.	------	
12	58.88	26.2	31	23.4	81.5	N, SW	6.9	8.8	A.-Cu. E	Cu.	4.8	⊤ ⌐◪ ● p.
13	58.74	25.1	31	22.3	87.3	NE quad.	5.5	8	Ci.	Cu.	37.4	● p.
14	58.54	25.2	29.4	22.5	85.7	Variable	4.6	9.7	Ci.-S.	Cu.	23.8	● p.
15	58.27	25	29.4	22	87.9	SW	8.1	10	Ci.-S., A.-Cu.	Cu.	38.7	● a. p.
16	58.01	25.4	28.1	22.8	86	S, SW	8.7	9.7	Variable	Cu.	30.5	● a. p. ∪ p.
17	59.38	26.3	29.6	23.8	83.5	SW	6	8.7	A.-Cu. E	Cu.	.8	↘ ● p.
18	60.01	26.8	32	23.4	80.3	Variable	5.7	6.5	Ci.-S.	Cu.	------	↘ p.
19	59.17	26.3	31.9	22.9	82.1	NE quad.	6.5	8.8	Ci.-S. E	Cu.	6.6	⌐◪ ↘ ∪ p.
20	58.02	25.2	30.5	22.9	87.2	N, NE	4.7	9.7	Ci.-S.	Cu.	17.5	● p.
21	58.31	24.6	27	23	91.3	W	7.5	9.5	Ci.-S.	Cu.-N. SW	13.1	● a. p.
22	58.80	26.5	31	22.3	80.8	Variable	4.4	5	Ci.	Cu.	1.3	⌐◪ ● ∩ p.
23	58.52	26.7	33	23.7	82.5	Variable	4.6	7.5	A.-Cu. E	Cu. N	2.5	⊤ ● p.
24	56.83	26.8	30.5	22.9	82.2	SW	6.4	7.3	Ci.	Cu.	------	≡ a. ↘ p.
25	56.56	26.6	30.5	23.9	83.2	SW	5.6	8.2	Ci.-S.	Cu.	1	⌐◪ p.
26	56.99	25.7	30.5	23.5	87	Variable	4.2	9.2	Ci.	Cu.	.5	⊤ ● p.
27	56.93	26.1	28.9	23.9	83.3	SW quad.	14.5	9.8	Ci.-S.	Cu. SW	30.5	● p.
28	56.53	25.1	27.8	22.5	90	SW quad.	25.1	9.8	Ci.-S.	Cu.-N.	40.1	● a. p.
29	56.19	25.5	27.6	23.4	88.2	SW	24.9	9.8	Ci.-S.	Cu.-N. SW	38.9	↙° ● a. p.
30	58.01	26.3	29	22.8	83.3	SW	15.4	8.7	A.-Cu.	Cu. SW	18.3	● a. p.
Mean	757.82	26.3	29.9	23.3	83.7	----------	9.4	8.7	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	432.4	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km.p.h.*	*0–10.*			*mm.*	
1	756.95	27.2	30.8	22.8	80	S quad.	8.4	9.5	Ci.-S.	Cu.-N.	------	● ≡° a.
2	57.10	27	32.3	23.4	84.6	SE quad.	7	8.5	A.-Cu. W	Cu.-N. SbyW	4.8	☾ ♌ a. ≡ ○° ⊤ ◟ p.
3	56.92	28.4	32.3	24.5	77.7	S quad.	11.1	8.3	A.-Cu. SW	Cu.-N.sbyw,wsw	.8	≡° ● a. d a. p.
4	56.73	27.7	31.3	24.3	78.5	S quad.	14	9.2	Ci.-S. E	Cu.-N. S	------	≡° a. p. ◸ p p.
5	56.77	26.4	31.6	22.8	83.8	SE quad.	8.5	7.8	Ci.-S.	Cu.-N. SSW	18.3	≡° ◠ a. ◟ ● p.
6	56.65	26	30.8	22.4	86.1	N, SSE	5.3	7.8	Ci.-S.	Cu.-N. S	------	≡° a. ◟ p.
7	56.80	26.9	32.5	22.5	78.8	S quad.	6.2	8.3	Ci.	Cu. S	------	◸ ≡° a. ⊤ ◟ p.
8	57.73	25.6	31.2	23	87.7	NW quad.	3.6	8.8	A.-Cu. SE	Cu.-N.	11.5	♌ ≡° a. ◸ ● p. ◟
9	58.51	25.5	30.9	22.8	88	N quad.	4.3	9	A.-Cu. EbyN	Cu.-N.	4.6	♌ ◠ a. ≡ p. ◸ d
10	58.52	25.3	30.4	23	88.5	N quad.	3.6	9.5	A.-Cu. EbyS	Cu.-N.	1.8	d^2 ≡° a. ◡ p.
11	58.69	26.1	31	23.4	84	N quad.	5.7	7.5	A.-Cu. SE	Cu.-N.	1.8	≡ a. p. ◟ d p.
12	58.57	26.1	31	23.1	83.2	N quad.	5.3	8.7	A.-Cu. E	Cu.-N.	------	⊤ a. ◟ ≡ a. p.
13	58.50	24.5	30.5	21.2	88.8	N quad.	3.2	8.7	Ci.-S. E	Cu. E	26.2	≡ d a. p. ● p.
14	58.44	25.2	31.1	22.2	86.5	N, S	3.9	8.2	A.-Cu. E	Cu.-N.	4.9	≡° a. d ☋ p.
15	58.12	24.6	28.3	22	90.5	Variable	3.7	9.5	Ci.-S. SEbyE	Cu.-N.	3.8	● ○° a. ◡ p. ≡ d
16	57.90	25	30	22.2	87.8	Variable	5	8	A.-Cu. EbyS	Cu.-N.	------	♌ ≡° ◠ a. ◡ p.
17	59.22	25.8	31.8	21.5	83.4	N quad.	3.9	6.2	Ci.	Cu.-N. E	------	♌ ≡° a. ◟ p.
18	59.90	25.6	31.4	21.5	85	N quad.	3.9	6.8	Ci.-S.	Cu.-N.	------	♌ ≡° a. p ◟ ☋ p.
19	58.88	25.9	32.3	21.7	83.6	NW quad.	------	7.7	A.-Cu. E	Cu.-N.	------	♌ ≡° a. ◟ p.
20	57.90	24.3	29.8	22.5	87.2	Variable	------	8	A.-Cu., Ci.-S.	N.	79.3	≡° a. $●^2$ p.
21	58.24	25.7	30.9	22	83.3	SE quad.	------	9.5	Ci.-S.	Cu.-N.	------	● ≡° a. ⊤ ◟ p.
22	58.69	25.4	31	21.5	83.8	Variable	------	7.3	Ci. E	Cu.-N.	------	♌ ≡° a. ⊤ ◟ p.
23	58.19	25.8	31.9	20.8	84.7	Variable	------	5.7	A.-Cu. NE	Cu., Cu.-N.	26.9	♌ p. ◠ ⊤ ◟ ● ◡
24	56.78	25.4	30.5	21.6	87.7	NW quad.	------	8.7	Ci., Ci.-S.	Cu.-N. W	3.6	≡° ◸ a. ◟ p.
25	56.60	24.7	29.6	21.3	91.8	N quad.	------	10	Ci.-S.	Cu.-N.	10.9	♌ ≡° a. ◟ p. ●
26	56.88	25	29.9	22.6	90.2	N	4.5	10	Ci.-S. NE	Cu.-N. WbyS	45.4	◸ a. ◟ ≡ ● a. p.
27	56.54	25.5	30.3	21.9	86.3	Variable	11.3	10	Ci.-S.	Cu.-N. WSW	19	p ≡ ◸ ↙° ● ◟
28	56.33	27.6	31.9	22.9	77.3	S, SSW	22.1	9.5	A.-Cu. WSW, W	Cu.-N. SSW, SW	------	d a. ≡ a. p. ◟ p.
29	56.30	28.1	31.6	26.5	73.6	S quad.	22.8	8.8	Ci.-S.	Cu.-N. SW	------	∞ a. p. ◟ p.
30	58.01	27.8	32.1	24.8	72.6	S	13.8	6.3	A.-Cu. E	Cu.-N.	------	◟ p.
Mean	757.71	26.1	31	22.6.	84.2	----------	7.9	8.4	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	263.6	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.05	28	32.6	24	78.2	WSW	0.5	7.2	Ci. E	Cu.-N. SW	------	$○^2$ a. p.
2	57.33	28.9	34.3	24.4	75.1	SW quad.	.3	6.7	Ci., Ci.-Cu. ESE	Cu. W	------	$○^2$ p.
3	57.12	28.2	35.2	24.2	78	S quad.	.3	7.8	A.-Cu. WSW	Cu.-N. WSW	------	◟ ⊤ p.
4	56.86	27.6	32.4	24.2	78.8	SSE	.3	7.5	A.-S. E	Fr.-N.	------	$○^2$ a. p.
5	57.06	27.4	35	23.9	81.5	Variable	.3	8.1	Ci.-S. E	Cu.-N. SW	------	⊤ p.
6	57.01	28	34	23	81.3	ESE	.5	7.8	Ci. E	Cu.-N. SSW	9.1	
7	57.12	28.4	34.4	23.5	80.7	SE quad.	.5	6.7	Ci. E	Cu. SSW	------	● ◸ $○^2$ a. ◟ p.
8	58.30	27.5	31	25	85.2	WNW	.8	8.3	Ci., Ci.-S. E	Cu.-N. SSW	------	$○^2$ a. ◟ p.
9	58.96	26.8	32.8	24	85.8	E, NW	.5	7.5	Ci.-S. E, NE	Cu.-N. S	30	♌°○°a.$●^2$◸^{2}◟p.
10	59.08	27	31.8	23.3	81.8	SSE	1	8.8	Ci.-Cu. NE	Cu., Cu.-N. SSW	14	● a. p. ◟ a.
11	59.12	27	32.9	22.2	84.8	ESE	.8	6.7	Ci.-S. ESE	Cu. SSW	2.3	
12	59.34	26.4	32.5	24	85.6	NW quad.	.7	9.3	Ci.-Cu. E	Cu.-N. S	1.5	● a. p.
13	58.99	26.3	32.5	24.2	87	NE	.8	8	Ci.-S. E	N., Cu.-N.ssw,sw	2.8	♌ a. ● p.
14	58.76	26.6	32	24	85.5	WNW, ESE	.7	8.3	Ci.-S. E	Cu. SW	4.6	d ● p.
15	58.56	25.6	29.2	23	89	S, WNW	.2	9.3	Ci.-S. NE	N., Cu.-N. W	6.4	● a. p. $○^2$ d p.
16	58.30	26.6	31.2	22.8	85.5	S	.7	7.8	Ci.-S. NNE	Cu.-N. S	1.8	● a.
17	59.66	27.4	34.2	24.2	83.6	W	1	5.8	Ci.-S. NE	Cu., Cu.-N. SSW	.5	◡^{2} a. ⊤ ●° p.
18	60.52	27.8	33.5	24	83.7	WNW, SE	.8	7.2	Ci. NE	Cu. S	------	≡ a. ○^{2} ◡^{2} p.
19	59.69	26.2	31.5	24.4	88.2	WNW	.2	8.3	Ci.-S. NE	Cu.-N., N. W	4.1	♌^{2} a. ● p.
20	58.25	25	30.6	23	91.8	W	.7	9	Ci.-Cu. S	Cu.-N. N	40.1	● a. $●^2$◸^{2} p.
21	58.70	26.1	32	22.4	85.3	SSE	1	9	Ci. S	Cu. NNE	9.2	● d a. ● p.
22	59.36	26.9	32.4	23.2	86.2	SE quad.	.5	7.3	Ci.-S. N	Cu. SbyE	------	● a.
23	58.64	28.1	34	23.9	83	Variable	.7	5.8	Ci. E	Cu. SW	------	♌^{2} a.
24	57.09	27.8	34.2	23.5	81.2	Variable	.2	7.5	Ci. NE	Cu. W	------	☋^{2} ◡^{2} ○^{2} a. ◸ p.
25	56.74	27.1	33.1	23.6	83.8	NW quad.	.5	8.3	Ci. N	N. NW	6.6	☋^{2} ♌^{2} a. ● ◸ d p.
26	56.88	26.1	32.7	24	88.2	WNW	.7	9	Ci.-Cu.,Ci-S.SE,ESE	N. SW	20.9	$●^2$ p.
27	56.77	26.7	31.5	23.8	86.9	Variable	.5	8.7	Ci.-S. E	Cu.-N. WNW	16.6	◡^{2} d ◠ a. ● p.
28	56.40	27.1	31.4	23.2	80.8	Variable	.7	8.7	Ci.-Cu. E	Cu.-N., Cu. W	------	● a.
29	56.52	27.9	33	24.3	73.5	S	.8	6.7	Ci. E	Cu. WSW	------	$○^2$ a.
30	58.19	28.4	33.8	24.2	76.3	SSE	.3	5.8	Ci.-S. E	Cu. WSW, SW	------	♌^{2} a.
Mean	758.08	27.2	32.7	23.7	83.2	----------	.6	7.8	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	170.5	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.31	27.8	33.2	24.5	79	W	1.3	6.3	Ci.-S.	N. W	0.3	⊤ d° ↘ p.
2	56.43	28.2	33.5	25	80.5	SW quad.	1.3	6	Ci.-S.	Cu.-N., Cu. w, sw	14.2	⊤ ◪ ● ↘ p.
3	56.60	27.6	32	24.7	82.3	SW	1.5	5.7	Ci., Ci.-S.	S.-Cu. NE	------	⊤ p.
4	56	27.4	31	24	79.7	SW	2	8.3	Ci.-S.	Cu.-N. S	------	↘ p.
5	56.50	27.3	30.7	25.3	83.3	SW	1.5	7.8	Ci.-S.	Cu.-N. SW	8.9	☾° a. ◪ ●° ↘ p.
6	56.42	26.1	31.6	24.5	86.8	SW	1.2	7.2	Ci.-S.	N. SW	31.7	⊤ ●° ◪ p.
7	56.52	27.2	32.2	24.4	85.5	SW	1.3	6.2	Ci. NE	Variable. SW	1.5	☽° ⊕ ○ ⊤ ● ↘ ☋
8	57.97	26.8	30.6	24.7	85.2	SW	1	7.5	Ci.-S. S	N. SW, N	3	☊ a. ◪ ●° ↘ p.
9	58.73	27.1	31.5	23.8	84.2	NE	.8	8.3	Ci.-S. NE	N. SW	65.3	d° a. ↘ p.
10	58.60	26.7	29.5	24.5	86.8	Variable	.8	10	Ci.-S.	N. SW, NE	------	⊤ ● a. ↘ p.
11	58.44	26.8	30.1	24.6	86.3	S	.7	7.3	Ci.-S.	N. N	126.5	d° a. ●° ⊤° p.
12	59.01	26.3	30.1	23.5	86.8	S quad.	1.2	9.5	Ci.-S.	N. SE, E	10.6	●² ◪ ◪² a. ↘ ◪ ●°p.
13	58.63	27.1	31.2	24	84.8	N	1.2	7.2	Ci.-S. N	N. N, SE	9.5	☽ ●° ↘ ◪ p.
14	58.49	26.5	30.2	24	85.8	Variable	1	8.7	Ci.-S.	N. NE, S	20.6	d a. ⊤ ●° p.
15	57.87	26.4	29.9	24	85.7	S	1.5	9.5	Ci.-S. N	N. NE, SE	4.4	● a. p. ☋ ⌣ ◪ ° p.
16	58.04	25.6	29	23	89.5	S	.7	9.7	Ci.-S.	N. S	17	d ☊ a. ● a. p.
17	59.33	25.8	30.6	23.2	86.6	Variable.	1.2	7	Ci.-S. SE, NE	Cu., N. SE, S	12.5	☊ a. ● ⊤ ☋° ☾° p.
18	60.22	27.1	31.2	23.4	83.8	NE, S	1.2	5.8	Ci.-S. NE	Cu., N. E, SE	17	☊² a. ↘ ☋ ⌣ p.
19	59.19	26.9	29.6	24.5	84.8	NE	1.3	9	Ci.-S.	N. N, NE	8.1	◪ a. ● a. p. ↘ p.
20	57.54	26.1	30.1	23.9	84.5	Variable.	1.5	9	Ci.-S. SW	N. N	23.2	● a. p. ↘ p.
21	57.89	25	27.1	23.6	89.8	S	1	10	Ci.-S.	N. S	.6	●° a. p.
22	58.77	26.7	30.7	22.9	83	Variable	1.5	5.3	Variable.	Cu. SW, E	4.1	↘ ☋ ⌣ p.
23	58.28	27.9	31.5	24.6	82.2	NE	1.5	8.5	Ci.-S. E	N. S	2.1	◪ ● a. ↘ p° p.
24	56.34	28	32.9	24.2	76	SW	1.2	6.3	Ci.-S. S	Cu. SW	------	☋° ● ☊ a. ↘ p.
25	56.33	28.2	32	25.6	81.7	Variable	1.3	7.5	Ci.-S.	Cu.-N. SW	5.8	☊ a. ⊤° ↘ ● p.
26	56.57	26.8	31.4	24.1	83.8	SW, NW	1.5	9.7	Ci. NW	N. NW	1.3	◪ ● a. ⊤ ↘ p.
27	56.22	26.7	31.9	24.5	81.8	SW	1.2	6.3	Ci.-S.	Cu.-N. SW	------	◪ d° p.
28	55.44	26.7	31.1	23.7	80.9	S quad.	2.2	8.8	Ci.-S. SW	N. SW	------	
29	55.42	26.3	28.6	24.3	80.9	SW	2.8	9.3	Ci.-S.	N. SW	2.6	●° a. p.
30	57.48	26.7	30.1	23.8	82.5	SW	1.2	6.3	Ci.-S. S	N. S	------	●° ☊ ☽ a.
Mean	757.52	26.9	30.8	24.2	83.8	----------	1.3	7.8	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	390.8	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	756.75	28.8	31.8	25.9	74.4	SW	2.7	7.8	Ci.-S.	S.-Cu. W	------	d a.
2	56.94	29.7	32.6	27.9	72	SW	2.5	7.8	Ci.-S.	S.-Cu. WSW, SW	5.1	↘ p.
3	56.85	28.6	32.2	25.4	78.7	SW	2.8	8	Ci.-S. NNE	S.-Cu. SW	------	d a. ↘ p.
4	56.42	29	32.1	26.5	74.7	SW	3.2	7.7	A.-Cu. NW	S.-Cu. SW	1.3	⊤° ↘ p.
5	56.72	28.2	32.8	25.2	78.2	S quad.	2	8.3	A.-Cu. W	S.-Cu. SW	------	d° ↘ ⊤ a.
6	56.49	29	32.2	25.8	74.7	S quad.	2	6.7	Ci.-S. N	S.-Cu. SW	24.6	○ a.
7	56.84	28.4	32.9	25.1	79.8	S quad.	.7	6.5	Ci.-S.	S.-Cu. SW	10.7	● ☽ a. ↘ ⊤ p.
8	58.29	26.3	30.5	23.4	86.3	Variable	.5	7.8	Ci.-S. NNE	S.-Cu.	------	↘ ● a. ⊤ ↘ p.
9	58.85	26.3	32.9	23.1	86	N quad.	1	5.7	Ci.-S.	Cu. NE	5.1	◪ d° ↘ p.
10	58.89	26.3	30.6	22.8	85.5	S quad.	.8	7.7	A.-Cu. E	S.-Cu. SSE	------	d a. p.
11	59.04	26.2	30.8	23.5	89.5	S, NE	.3	7.2	Ci.-S. N	S.-Cu.	7.1	⊤ a. ● d p.
12	59.09	26.1	31.3	23.2	84.2	SSW, N	.7	7.5	A.-Cu. SE	S.-Cu. ESE	3.3	p ☋ p.
13	58.90	25.4	32.6	23.4	91.7	N quad.	.7	8.5	Ci.-S., A.-Cu.	S.-Cu. ENE	12.9	p ⊤° d° p.
14	58.60	25.2	30.7	22.5	89.8	N quad.	.7	7.5	Ci.-S. SE	S.-Cu. SW	1	⊤ d° p.
15	58.33	25	29.5	22.6	89.9	N quad.	1.2	8.2	Ci.-S.	S.-Cu. SSE	39.9	d a. ● ⌣ p.
16	58.20	25	30	22.1	88.5	N	1	6.7	Ci.-S. E	S.-Cu. SSE	15.5	◪ p ●° ⌣ p.
17	59.65	26	31.7	22.3	84.8	N	1	6.8	Ci.-S. E, ESE	S.-Cu. S	.8	○ a. ⊤° d° ↘ p. ☽
18	60.36	27	32.5	22.6	85.2	N quad.	1	6.7	Ci.-S.	S.-Cu. E	7.1	● ⊤ ☋ ↘ p.
19	59.60	26.6	30.4	23.6	84.7	NE quad.	1.2	7.5	A.-Cu. E	S.-Cu. N	------	⌣ p.
20	58.07	24.8	30.5	22.2	90.4	NW quad.	.7	7.7	A.-Cu.	N. NE	143.7	☊ a. ⊤ ● ↘ p.
21	58.44	25.8	30.3	23.2	87.5	SSE	1.3	9.7	A.-Cu.	N., S.-Cu. S, SSE	2.6	p ● d° a. d° ↘ p.
22	59.14	25.8	31.1	22.5	86.2	N quad.	1	5	Ci.-S. E	S.-Cu., Cu.	------	⊤ p.
23	58.67	26.2	33	22.5	85.7	N quad.	1.2	3.5	Ci.-S.	Cu. ENE	3	☋ ☊ a. d° ↘ p.
24	56.81	26.7	31.6	22.6	87.5	N quad.	1.2	7	Ci.-S.	S.-Cu. WNW	1	d° a. ↘ p.
25	56.55	26.6	33.1	23.5	87.2	N	1.2	7.3	Ci., Ci.-S.	Cu.-N. NW	73.7	≡ a. ⊤ ●² ◪ ↘ p.
26	56.59	26.3	31.6	23.1	89	W	.8	9	Ci.-S.	S.-Cu. WNW	3.8	● a. ●° ↘ p.
27	56.34	27	30.9	24.5	84.9	W quad.	2.7	9.3	A.-Cu.	S.-Cu. W	30.8	●° p ↘ p.
28	55.92	27.7	30.6	24.6	80	SW	3.7	8.8	A.-Cu.	S.-Cu. SW	2	p° a. ↙° p.
29	55.98	28.2	30.6	25.5	75.3	SSW	2.7	8	A.-Cu., Ci.-S.	S.-Cu. SW	3.3	d° ↙ p.
30	57.93	29.2	32.7	27.2	73.2	SW	2	3	Ci.-S.	S.-Cu. SW, SSW	------	
Mean	757.84	26.9	31.5	23.9	83.5	----------	1.5	7.3	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	398.3	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	755.98	28.2	32.5	25.3	79.2	W, W SW	9.3	7.8	Ci.-S.	Cu. W	------	p° a. ↙° p.
2	56.08	28.7	33.2	25	77.6	WSW	9.6	7.3	Ci.-S.	Cu. SW	------	☽° a. ↙ p.
3	56.12	26.9	29.5	23.5	84.3	W, W SW	7.3	7	Ci.-S.	Fr.-N. SW	13.7	● a.
4	55.70	27.5	32.8	23.1	81.5	WSW	8.6	8.7	Ci.-S.	Cu. SW	------	● a. ↙ p.
5	55.96	26.4	29.2	22.4	87.6	SW, WSW	5.8	9.3	Ci.-S.	Fr.-N. SW	40.9	☿° ● a. d p.
6	55.76	28.1	33.2	24.3	80.8	SW, WSW	5.8	7.2	Ci.-S.	Cu. SW	------	↙° p.
7	56.14	28	34	24.1	78.3	SW	5.5	5.2	Ci.-S.	Cu. SW	------	☽² a. ↙° p.
8	57.94	26.5	31.9	23.5	85.5	SSE	3.3	7.5	Ci.-S. NE	Cu.-N. SE	.3	☿ d p.
9	58.47	27.7	32.5	24	82.5	E, ESE	5.4	4.5	Ci., Ci.-S. NE	Cu.	6.8	↙ p.
10	58.35	27.1	31.3	23.5	81.5	ENE, E	5.7	8.2	A.-Cu. NE	Fr.-N. ESE	------	● a.
11	58.78	27.3	33	23.1	81.5	WSW, E	5	6.7	Ci.-S.	Cu., Cu.-N. SSE	6.7	●° a.
12	58.95	27.7	30.9	23.3	77.8	NE, ENE	9.4	7.5	Ci.-S.	Cu. E	1.8	● a. p.
13	58.69	26.1	28.4	23.5	88	E	6	8.5	Ci.-S.	Cu.-N. Fr.N.NE,ENE	7.1	d ● a.
14	58.25	26.6	31.1	22.5	84.9	NE quad.	5.5	6.3	Ci.- S.,Ci.	Cu., Cu.-N. SE, E	------	d° p.
15	57.96	26.4	31.6	23	85.6	SE, E	5.3	8.2	Ci.-S.	cu.,Fr.-N. E, ESE	42.2	● p.
16	57.81	25.2	30	23	92	NE, E	4.2	9.8	Ci.-S.	Fr.-N. E, ENE	13.3	● d a. p. ☋² p.
17	59.20	26.3	30.9	22.5	86	SE, E	4.5	6.5	A.-Cu. SSW	Cu.-N. SW, SSW	------	≡ a.
18	60.11	26.8	31	22.9	85.1	E	6	7.5	Ci. E	Cu.	11.7	≡ a.
19	59.32	26.6	31.5	22.1	80.7	E, NW	5.5	9.8	Ci.-S.	Cu.-N.	------	● ≡ a. d° p.
20	57.90	25.6	30.5	22.5	90.3	NE	6.7	7.3	Ci.-S.	Cu.,Fr.-N. E, quad.	18.5	● a. p.
21	57.93	24.7	27.5	22.6	94.5	NE, W	6.2	10	Ci.-S.	Fr.-N. S,SSW	22.8	● a. p.
22	58.82	26.4	31.1	21.3	84.5	E quad.	5	3.5	Ci.	Cu.	------	● a. d° ↙° p.
23	58.17	26.3	31.8	22.4	85.5	ESE	4.3	2.7	Ci.	Cu. E, NE	------	
24	56.04	27.3	33.2	22.9	78.6	W quad.	7.1	7	Ci.-S.	Cu. WSW, SW	------	↙ p.
25	56.28	26.4	32.1	23.1	82	Variable	4.7	9.2	Ci.-S.	Cu. NNW	18.1	☿° ↙ ● p.
26	56.14	25.9	31	22.8	88.2	W, ESE	3.9	9.2	Ci.-S.	Cu.-N. NNW	1.8	● a. p. ↙ p.
27	55.47	26.4	31.8	23.2	86.5	WSW, SW	8.2	8.5	Ci.-S.	Cu.-N.,Cu. W, WSW	43	● ↙ p.
28	54.66	26.5	31	23	84.7	SW	10.1	7.5	Ci.-S.	Fr.-N.,Cu.N, SW	2	● d a.
29	54.99	27.1	31.5	24.5	82.2	SW	8.6	5.5	Ci.-S.	Fr.-N. SW	------	d° a. p.
30	57.08	27.6	33.5	24	80	SW	6.4	3.3	Ci.	Cu. SSW	2.8	↙° p.
Mean	757.30	26.8	31.4	23.2	83.9	----------	6.3	7.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	253.5	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	755.39	29.1	34.2	24.2	68.2	SW	13.3	8.2	Ci.-S.	S.-Cu. SW	------	☽² a. ⊓↙° p.
2	55.55	29	35.2	23.1	65.5	SW	13.7	8.8	A.-Cu. WNW, NW	S.-Cu. SW	------	
3	55.28	29.3	33.9	25.5	66.5	SW	12.6	8.5	A.-Cu. NW	S.-Cu. W	------	d° p.
4	54.93	28	31.7	24.5	73.1	SW	11.2	9.8	Ci.-Cu. NE	S.-Cu. SW	------	d° a. p. ☽° a.
5	55.07	27.2	29.8	24.9	74.9	SW	---------	9.7	Ci.-S.	S.-Cu. WSW, W	------	d° a. p.
6	54.87	28.2	32.9	23.8	73.8	SW	---------	9.7	A.-Cu. NW	S.-Cu. SW	12.7	● p.
7	55.42	28.3	32.3	24.3	74	SW	9.6	10	A.-Cu. WSW	S.-Cu. SW	------	
8	57.22	27.1	33.7	22.6	82.3	SW	8.2	8.2	Ci. NNE	S.-Cu. S	------	☊°≡°a.⊓↙°d²↙p.
9	58.37	26.8	32.7	23.1	84	SW, N	---------	7.8	Ci.-S. E	N. SE	18.2	⊓↙● a. ☿ d² ⊓↙ p.
10	58.44	26.2	29	23.1	86.2	SW, N	---------	9.7	Ci.-S.	S.-Cu. NE	1.8	d° a. ↙ p.
11	58.63	26.8	32.8	23.2	82.7	SW	---------	8	A.-Cu. E	S.-Cu. NE, SW	3.8	● a. ⊓↙ ☋² ∪ p.
12	59.18	27.1	31.3	22.4	83.5	SW, N	11.9	8.5	Ci.-S.	S.-Cu. NE	------	↙ ☋² p.
13	58.81	26.4	30.9	23.3	87.1	NE, SW	9.5	8.8	Ci. E	S.-Cu. NE	31.6	d² ⊓↙ a. p. ● p.
14	58.31	25.7	27.8	23.3	88.5	SW, NW	8.8	9.8	Ci.-S.	S.-Cu. NE	7.4	● a. d a. p.
15	58	26.6	31.7	22.6	87	SW	9.8	9	Ci. NE	S.-Cu. SE, E	------	⊓↙ d² ☋² p.
16	57.71	26.2	32.4	23.1	86.1	SW	7.1	9.5	A.-Cu. E	S.-Cu. SE	16.1	● a. p. ☋² ∪ p.
17	59.16	26.2	30.9	22.3	84.2	SW	6.7	8.3	Ci.	S.-Cu. SE	1.8	d a.●°◠°☋°∪°p.
18	60.12	26.5	31	22.7	85.8	SW, N	8.4	8.3	Ci. NE, E	S.-Cu. SW	14.1	∪° d a. ⊓↙● ↙ p.
19	59.37	26.2	31.5	22.5	83	SW	7.5	9.3	Ci. E	S.-Cu. S, N	20.6	⊓↙ ↙ ● p.
20	57.85	26.4	32	22.8	86.5	Variable	6.2	8.8	Ci. E	S.-Cu. SE	23.1	d° ◡° a. ⊓↙ ● p.
21	57.42	26	29.4	23.4	86.6	NE quad.	12.6	9.8	Ci.-S.	N. NE	7.7	● a. p. ⊤ d° p.
22	58.80	26.4	32.5	22.7	84.5	E	---------	9.5	Ci.-S.	S.-Cu. SE	3.6	d² a. ●° ↙ p.
23	58.63	26.4	29.5	22.6	86.7	SW	9.2	9	Ci.-Cu. NE	S.-Cu. NE	------	☋° a. ↙ p.
24	55.52	27.7	31.5	22.8	73.8	SW	11.6	10	Ci.-S.	S.-Cu. W	------	∪° ☊° a. ↙ p.
25	56.38	27.2	30.5	23	80	SW	8.6	9.3	Ci.-S.	S.-Cu. NW	24.4	☋°∪°◡°a.⊓↙●°p.
26	56.69	26.9	29.7	22.3	83.7	NW, N	13.2	9.3	A.-Cu. N	S.-Cu. N	4.3	●° a. p. ↙ p.
27	55.20	27.2	32.2	23.3	81	SW	11.4	9.2	A.-Cu. N	S.-Cu. SW, W	------	⊓↙ d° ↙ p.
28	53.91	27.7	31.2	24.9	74.7	SW	---------	9.7	A.-Cu. SW	S.-Cu. SW, W	2.3	d° p.
29	53.56	27.4	31.7	24.6	80.2	S, SSW	9.6	9.8	Ci.-S.	S.-Cu. S	8.6	● a. p.
30	56.01	27.5	32.2	23.6	80.1	SW	12.3	8.2	A.-Cu. SW	S.-Cu. S, SW	16.8	● p.
Mean	756.99	27.1	31.6	23.4	80.5	----------	10.1	9.1	----------	----------	218.9	
Total	------	------	------	------	------	----------	------	------	----------	----------	------	

METEOROLOGICAL DATA, ETC.—Continued.

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	755.58	26.6	31.1	23.9	86.3	SSW	2.8	7.8	Ci.-S. N	Cu. SW	7.7	☋² a. ☊²●°a.● ☐◹ ◟ p.
2	55.91	26	31.6	24	90.3	SSW	1.8	7.5	A.-Cu. W	N. SW	2.5	☊² a d° a. p.
3	55.45	27	31.1	23.6	83	SW	2.5	7.7	Ci.-S. NNE	N. SSW	10.7	●° a. p. d° p.
4	55.02	25.5	29.7	23.8	89.7	SSW	2.8	9.8	Ci.-S.	N. SW, SSW	1.3	●° a. ☄°° d° p.
5	55.04	25.7	29.3	23.2	89	SSW	3.5	9.5	A.-Cu. NW	N. SW quad.	8.7	d° a. p. ☁ p.
6	55.03	25.4	30	24	91	SSW	2.5	10	Ci.-S.	N. SW	16.8	● p.
7	55.47	26.3	31.6	23.5	86.3	SSW, S	2.3	9.2	A.-Cu. NW	N.,Cu.-N. S, SSE		☊ a. ┼ ◟ p.
8	57.21	27	32.7	23.6	84.8	S quad.	1.5	8.5	Ci. NW	Cu.-N. SE	1.3	☊²a.◯² d. ◟ ☐◹ p.
9	58.49	26.3	32.2	23.2	86.5	Variable	1.3	7.7	Ci. NE	Cu. SE		☊° ◯⁵ a. ☆² ◟ p.
10	58.23	26.2	31.6	22.6	85.8	SE quad.	1.2	7	Ci.-S. ENE, NE	N. SE, ENE	.8	☊° ≡ a. ◯° d° p.
11	58.42	26	31.7	23.2	89.2	Variable	1.2	9.5	Ci.-S. NE	S. NE		☊☿≡ a. ☆° ☋² ◟ p.
12	59.11	26.3	29.9	23.2	83.8	ENE, ESE	1.8	7.2	Ci.-S. NE	Cu. NE	1	☊° a. ● ┼ ☋ ²p.
13	58.88	26.3	32.3	23	84.2	NW	1.2	7	Ci.-S., A.-Cu. E	N. ESE	9.4	● a. d° ☋ ² p.
14	58.28	24.7	26.5	23.4	94.7	Variable	1	8.3	A.-S.	N. ESE	10.7	●° d° a. ◯² p.
15	57.93	25.4	29.7	23	87.8	E quad.	1	8.7	Ci.-S. SSW	N. E	12.5	☊² a. d° a. p. ●² p.
16	57.67	24.5	27	22.7	91.7	SE quad.	1	8.5	Ci.-S.	N. SE	1.3	◯° d° ●² ☐◹ p.
17	58.88	25	28.8	22.5	90.8	SE quad.	.8	8.2	Ci.-S. NE	N. SE	11	☊° a. ◯° ●² ☐◹ d°p.
18	60.15	25.6	32.2	23	88.5	SE	1	8.5	Ci.-S. NE	N. Variable	3.1	◯²a.◯° ●° d° p.
19	59.28	25.4	31.2	23	88.7	NNW	1.5	9.2	Ci.-S. ENE	N. ESE	1.1	☋² ☊² d° a. ◟ p.
20	57.76	25.9	30.3	22.9	85.8	E quad.	1.5	6.8	Ci.-S. SE, NE	Cu. E quad.	11.9	d° a. p. ●° p.
21	57.26	25.6	29.6	23	88.2	E quad.	1.2	8	Ci.-S. NE	N. SE	20.3	●°a●²☾°☐◹p.◯°
22	58.68	25.5	31	23.2	88.3	ENE, ESE	1.2	9.5	Ci.-S. NE	Cu. ESE, SW	13.7	≡◯°a.● °☐◹☋²p.
23	58.77	26.2	32.2	22.5	87.2	E quad.	1.2	7.7	Ci.-S. ENE	N. WNW	22.4	☋°☋²a.●²☄°◟ p.
24	55.34	24.9	30	23.3	90.8	W quad.	1.5	9.5	Ci.-S., A.-S.	S.-Cu.,Cu. S quad.	1	☋²d°a. ┼ ◠° ☐◹p.
25	56.31	26.2	31.3	22.6	86.2	S quad.	1.8	6.7	Ci.-S. NW, ESE	N.-Cf.,Cu. W quad.	3.1	d² a. p. ☐◹ ◟ p p.
26	56.70	26.8	32.3	23.5	86.7	W quad.	1.5	9	Ci.-S. NE	Cu.,N. SW	29.9	☌° a. ●² ☐◹p.
27	55.24	25.2	30.7	23.5	93	SW quad.	1.2	7.8	Ci.-S.	N. SW	5.8	d° ◯² a. ●° p.
28	53.11	26	29.2	24.2	88.7	SSW	3	9.7	Ci.-S. NNE	N. SSW	13.3	●° a. ● p.
29	52.96	25.3	29.2	24	92.5	S,SSW	2.8	9.7	Ci.-S. NE	N. S	14.3	d° a. ● p.
30	55.59	25.7	28.6	24	90.8	SSE	3.3	9	A.-Cu. WNW			
Mean	756.92	25.8	30.5	23.3	88.3		1.8	8.4				
Total											235.6	

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km.p.h.*	*0-10.*			*mm.*	
1	755.55	26.4	32.4	23.7	94.3	SE	6.8	7.8	A.-Cu.	S.-Cu. SW	15.3	◟ ≡ a. p a. p.
2	56.19	25.8	28.3	24	95.3	N, SE	6.7	8.2	Ci.-S.	N. SW	9.1	d a. ● a. p. ◟° p.
3	55.43	26.6	31.4	23.9	89.1	Variable	8.1	9	A.-Cu.	S.-Cu. SW, S	10.7	◟° a. ●° a. p. p p.
4	54.90	25.6	32.1	24.1	95.5	SE quad.	8.4	10	A.-Cu.	S.-Cu. SE	17.2	d a. p ●° p.
5	54.91	25.3	29.2	23.3	94	SE quad.	9.8	10		N. SW	67.4	●° d° a. ● ┬ p.
6	54.97	25	28.9	23.1	96.8	Variable	9.1	10		N. W quad.	56.3	● d a. p.
7	55.37	26.4	32.4	23.4	90.8	SE quad.	8.6	9.7	A.-Cu.	S.-Cu. SW, SE	18	┬° ● p.
8	57.04	26.7	34.1	23.8	88	SE	12.4	8.8	A.-Cu.	S.-Cu. SSE	16.5	◠ a. ☐◹ p p.
9	58.47	26.8	34.5	23.3	87.5	S quad.	11.6	9	A.-Cu.	S.-Cu., N.	69.8	d° ◯°a.☐◹☄°°●p.
10	58.24	27.5	34.5	24	85.8	Variable	10.3	8.5	A.-Cu.	Cu. SE	6.6	d° a. ☐◹ ◟° ● p.
11	58.44	27.2	33.1	24.4	88.3	SW, SE	7.2	9.5	A.-Cu.	S.-Cu. SE	3.9	┬° p° d° p.
12	58.85	28.2	35	24.2	83.9	Variable	9.8	7.2	A.-Cu.	Cu. SE		☐◹ ◟ ☋° °° p.
13	59.03	27.1	33.4	24.5	86.8	Variable	5.3	9	A.-Cu.	Cu., S.-Cu.	.6	◟ ┬ d ☋ ☿ p.
14	58.08	26.3	30.8	24.5	92	S, SE	5.9	8.5	Ci.-S., A.-Cu.	N. S	.5	d p.
15	57.58	27.7	33.6	23.6	83	SE	9.8	6.8	Ci.-S., A.-Cu.	Cu., S.-Cu.		☿° p.
16	57.40	27.3	34.6	23.8	82.8	E, SE	9.7	7.2	A.-Cu.	S.-Cu. E	1.3	☊² a. ☋ p.
17	58.56	27.7	33.6	23.3	84.3	SE	11	9.3	A.-Cu.	Cu., S.-Cu.	2.5	d a. ◟ p° p.
18	60.34	26.4	34.1	23.6	91.1	Variable	7.9	9.7	Ci.-S.	Fr.-Cu.,N.SE,NW	11.9	☐◹ a. p. p d p.
19	59.46	26.4	30.9	23.9	91.3	Variable	9.8	9.7	A.-Cu.	S.-Cu. NW	3	d ┬ ●° p.
20	57.80	27	34.3	23.5	87.3	SE, SSE	5.7	7	A.-Cu.	S.-Cu. SE	20.1	≡ a. p ☐◹ ┬ ◠² p.
21	57.08	27	33.1	23.5	85.8	Variable	8	6.3	Ci.-S., A.-Cu.	S.-Cu. ENE	1.1	☊ a. d ◟ p.
22	58.36	26.3	31.9	23.3	88.5	SE	12.6	9.7	A.-Cu.	S.-Cu. SE	6.4	p° a. d° p ☐◹ p.
23	58.96	27.2	32.6	23	85.7	SE, N	11.6	7.2	A.-Cu.	S.-Cu. S		◟° p.
24	54.78	26.5	29.2	22.6	90	NW	29.6	9.8	A.-Cu.	S.-Cu.,N.ENE,NW	66.3	☋° p a. ☄°° d ●² p.
25	55.88	26.8	34.2	22.5	86.7	SE	12.3	8.7	Ci.-S., A.-Cu.	S.-Cu. SSE, SE	52.4	● a. ◟ ☐◹ p² p.
26	56.81	27.1	31.1	23.4	89.5	NW	10.2	9.2	Ci.-S., A.-Cu.	Cu., S.-Cu.	13.3	d a. p ◟² ┬ p.
27	55.06	26	31.8	24.3	94.7	Variable	7.7	9.7	Ci.-S.	S.-Cu.,N.SE,WNW	22.6	p a. p. d² ● ☐◹ p.
28	52.72	25.5	30.4	24.1	96.2	SE	9.3	10		N. WSW, SW	11.2	● a. p.
29	52.24	26.1	30.9	23.8	92.7	SE	14.4	10		N. SW	5.4	● a. d p.
30	54.95	26.1	30.2	24	93.2	SE	13.9	10		N. SE, S	2.4	d a. p.
Mean	756.78	26.6	32.2	23.7	89.7		10.1	8.8				
Total											511.8	

METEOROLOGICAL DATA, ETC.—Continued.

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	754.86	26.9	32.0	24.3	90.3	SSE, S	3	9.7	Ci.-S.	Cu. SW	16.5	p a. ⌐⌋ p. ●↙°p.
2	55.32	25	27.7	24	96.7	SSE	2.8	10	Ci.-S.	N.	68.8	⌋ ⌐⌋ p. ● a. p.
3	54.82	25.6	29.9	22.9	94.2	S quad.	3.3	10	A.-Cu., Ci.-S.	N.	61.3	p ⊤ a. ● a. p.
4	54.15	25.1	28.7	23.6	96.8	S	2.8	10	----------	N.-cf.	25.1	d a. ● a. p.
5	54.02	25	28.4	23.1	95.2	SSW	3.5	10	----------	N., N.-cf.	40.9	● a. p. ↙° p p.
6	54.06	25.4	29	23.4	93	S quad.	2.3	10	----------	N.-cf.	62.3	d a. ● a. p.
7	54.78	25.3	31.4	23	92.3	S quad.	2.2	10	Ci.-S., A.-Cu.	N.	33.3	● a. p.
8	56.46	26.8	32.9	23.4	89.2	SSE	2.3	10	A.-Cu.	S.-Cu., N.	7.1	⌒° a. ⌋ ●° ⌐⌋ p.
9	57.99	26.6	32.9	23.8	88.3	SSE	1.8	10	Ci.-S.	Cu., Cu.-N.	26.7	⌒°≡°a. ● ⌐⌋ ⌋ p.
10	57.88	27.3	32.8	24.6	86.3	NE quad.	2	10	Ci.-S.	Cu., Cu.-N.	7.6	⌒≡°◠²a. ⌐⌋ ● p.
11	58.09	26.1	30.6	23.6	90.7	SE quad.	.7	9.8	Ci.-S.	Cu.-N.	2.1	⌒° d a. ●° ⊤ p.
12	58.59	27.5	33	23.6	85.2	S quad.	2.8	9.7	Ci.-S.	S.-Cu.	18.8	⌒° a. ⌐⌋ p.
13	58.76	26.7	31.3	22.7	86.8	N quad.	1.8	10	Ci.-S.	Cu. NE	------	⌒°≡°a. ◠ ⌋ ⌐⌋ p.
14	57.82	25.9	31.5	24	90.2	Variable	1.7	9.2	Ci.-S.	S.-Cu., Cu.	2	⌒° d a. ⌐⌋ ⊤ p.
15	57.33	27.5	33.1	23	83.7	SE	1.8	8	A.-Cu., Ci.-S.	Cu., S.-Cu.	------	⌒ ≡ ° a.
16	57.06	27.3	33.6	23.6	82.9	SE quad.	2	7	Ci.-S.	Cu.-N., Cu.	1.3	⌒ ≡ ° a. ⊤ d² p.
17	58.31	27	33.2	23.8	84.2	S quad.	2.2	10	A.-Cu., Ci.-S.	Cu.-N.	15.5	⌒° a. d p. ⌐⌋ a. p.
18	60.02	26.9	32	23.4	86.3	S quad.	1.3	10	Ci.-S.	Cu. SSE	1.3	● a. ●° ⌋ p. ⌐⌋
19	59.20	26.2	29.4	24.4	88.2	Variable	1.7	10	A.-Cu., Ci.-S.	S.-Cu., Cu.-N.	13.7	⌒≡ ° ● a. ●° p.
20	57.52	26.2	30.8	23.3	89	S	1.7	8	Ci.-S., A.-Cu.	Cu.-N., Cu.	15	⌒°≡°● a. ⌐⌋ ⊤ p.
21	56.91	27	31.9	22.5	85.3	SE quad.	1.3	7.5	Ci.-S., Ci.	Cu.-N., Cu.	1.5	⌒≡°a. ⌐⌋ ⊤ ⌋ p.
22	57.89	26.3	30.9	23.2	87.2	SE quad.	3.2	10	A.-Cu.	Cu.-N.	13	p a. d ⌐⌋ ● ⌋ p.
23	58.76	27.1	31.5	22.8	83.8	Variable	2.2	10	A.-Cu.	Cu.-N., S.-Cu.	6.6	⌒°≡°● a. ●° ⌋ p.
24	54.34	26.9	29.8	23	83.8[1]	NW quad.	6.3	10	Ci.-S.	N., Cu.-N.	180.6	●∪² a. ↙² ●² p.
25	55.36	26	31.2	22.5	86.8	SSE, S	3.7	10	Ci.-S.	N., S.-Cu.	3.8	↙ ● ◯²a. ⌐⌋ ●° p.
26	56.65	26.7	31.1	23.1	88.2	N quad.	1.7	10	Ci.-S.	Cu.-N., S.-Cu.	11.7	⌒≡°◯°a. ⌐⌋ ● p.
27	54.63	26.8	32	23.4	89	Variable	1.3	10	Ci.-S.	Cu.	52.9	⌒° a. ● p.
28	51.97	25.3	29.5	23.6	94	SSW, S	2.7	10	Ci.-S.	N.-cf. SW	30.9	● a. p.
29	51.38	24.8	27.1	24	96.7	SSE, S	3.3	10	----------	N.	53.3	● a. p p.
30	54.33	25.1	27.4	23.6	95.3	SSE, S	3.3	10	Ci.-S.	N., N.-cf.	22.2	◠ ● a. p ● p
Mean	756.31	26.3	30.9	23.4	89.3	----------	2.4	9.6	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	795.8	

BAGUIO.[2]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1512.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p.h.*	*0–10.*				*mm.*	
1	633.97	17.4	21.7	16.4	98.3	SW	30.4	9.7	Ci.-Cu.		Fr.-N. SW	22.3	≡²● a. ≡ p d p.
2	34.12	16.8	18.6	16	99.5	WSW, SW	37.2	10	----------		----------	18.1	p a. ● ↙° p. ≡² d²
3	33.83	17.1	19.3	16.4	98.5	SW	32.1	10	A.-Cu.		Fr.-N. SW	29.4	≡² ↙° ● a. ●² a. p.
4	33	17	19.7	16.2	99.7	WSW	26.6	10	Ci.-S.		S.-Cu. SW	19.6	≡² p a. p. ↙° ● p.
5	32.69	16.7	18	15.6	99.2	SW	39.8	10	----------		N.	132.4	≡² ● ↙° a. p.
6	32.69	16.4	18.5	15.6	99.8	WSW, SW	46.9	10	----------		N.	54.3	↙ ≡² ● a. p.
7	33.45	17.3	20.9	15.5	95.5	Variable	14.5	9.3	A.-Cu.		S.-Cu. SW	23.9	● a. p. p ≡² d² p.
8	35.31	18.4	23.5	16	85.8	SE	14 4	9	A.-Cu.	S	S.-Cu. SW, S	6.1	⊤ ● ⌐⌋ ≡ p.
9	36.43	18.1	23.5	16.1	90.9	SE, E	15.8	9.1	Ci.-S.	NNE	Cu. ESE	17.3	≡² ⊤ ⌐⌋ ° ● p.
10	36.26	18.9	24	15.9	89.6	NE, W	11.6	9.1	Ci.-S.		S.-Cu. ESE	3	◠°a. ◠° p ⌐⌋ ⌋ ≡² p.
11	36.40	18.4	23	16.4	92.5	E quad.	7.9	9.7	Ci.-S.	NNE	Cu.	4.4	p a. ≡² d² ● p.
12	36.98	18.8	23.8	16.3	86.5	SE	17.2	7.7	Ci.	ENE	Fr.-Cu. SE	------	⌐⌋ p.
13	36.96	19	25.2	16	83.2	Variable	9.9	8.6	A.-Cu.	ENE	S.-Cu. E	.8	⊤° ≡ d² ● ° p.
14	36.07	18	22.6	15.4	84.6	E	11.4	8.7	A.-Cu.	E	S.-Cu. NE	.3	⌒ a. d ≡² p.
15	35.84	18.4	23.3	16.5	86.8	E quad.	19.6	6.9	Ci.-Cu.	E	S.-Cu. ESE	.3	p a. ◠° ≡² ∪ p.
16	35.56	17.9	22.5	15.9	81.3	E	22.6	7.9	A.-Cu.	ENE, SE	Cu. EbyN	.3	⌒ a. ⊕ d p.
17	36.42	18.4	22	16.2	87.6	E quad.	18.3	9.9	A.-Cu.	E	S.-Cu. ESE	7.6	≡² ●p.
18	37.71	17.3	22.1	15.7	95.3	W quad.	10.5	9.6	A.-Cu.		Variable	17.3	≡² ● a. p. ⊤ p.
19	36.96	17	22.1	15.5	95.5	W quad.	13.8	10	Ci.-S.		S.-Cu.	14.7	⊤° ≡² d ● p.
20	35.81	18.8	23.8	15.7	85.8	SE quad.	12.6	7.7	A.-Cu.	NE	Cu. E	------	≡° p.
21	35.55	18.8	23.5	15.4	76.4	E	15.4	6.6	A.-Cu.	E	Cu. E	.8	⌒ a. ◠° p.
22	36.02	17.2	19.1	15.8	91	E quad.	19.8	10	A.-S.		N. SE	12.4	d ● a. p.
23	36.84	17	22.5	15.5	92.2	Variable	14.8	8.1	Ci.-Cu.	S	N.-cf. E	14.8	● ≡ p.
24	32.02	16.1	18.1	14.8	95.3	NW quad.	49.6	10	A.-S.		Fr.-Cu. N	424.5	d ⊕ ≡² ●² ↙² ⌋
25	34.20	18.3	23.9	15.2	90.4	SE, SW	13.5	7.9	Ci.-S.		S.-cf. SEbyE	------	●° a. ⊤ ≡ p.
26	35.01	18.1	24.8	16.2	93.3	N, NE	9.2	9.7	Ci.-Cu.	E	Cu.	54.6	≡² a. p. ● ⌐⌋ d p.
27	33.30	17.4	22.1	15.8	97	W	12.3	9.6	Ci.		Fr.-N. NW	29.5	≡² ● p.
28	31.12	17	19.5	15.5	100	W	15.6	10	----------		----------	94.2	≡² ●² a. p.
29	30.91	17.2	19.6	16.6	98.5	SW	14.8	10	A.-Cu.		Fr.-N. SSW	18.8	≡ a. ● a. p.
30	33.23	17.8	20.3	16.3	94.7	S quad.	16.4	9.9	A.-Cu.		N. SE, S	2.8	●° d° a. p. ≡² p.
Mean	634.82	17.7	21.7	15.9	92.2	----------	19.8	9.2	----------		----------	------	
Total	-------	------	------	------	------	----------	------	------	----------		----------	1024.5	

[1] Deduced from five observations.
[2] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Minimum.	Maximum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	754.79	26.4	31	23.4	87.2	S quad.	1.3	4.5	Ci.-S, A.-Cu.	S.-Cu., Cu.-N.	19.1	⌐◪ a. ● a. p.
2	55.08	27.6	29.9	25	82.2	S	2.5	9.5	Ci.-S.	S.-Cu.	4.9	d a. p. ◟° p.
3	54.62	27.2	30	25.1	82.4	S	2	8	Ci.-S.	Cu.-N.	------	d a. p.
4	53.89	27.3	30.9	24.5	83.7	S quad.	1.3	9.8	Ci.-S.	Cu.-N.	48.7	d ● p.
5	53.91	25.1	26.9	23	93.2	S	2.7	10	----------	N.	180.1	● a. p. ◞° p.
6	53.97	23.9	25.3	22.3	98.2	S quad.	1.7	10	----------	N.	234.3	●² a. p.
7	55.03	24.8	29.5	22.5	92.2	S quad.	1	8.2	Ci.-S.	Cu.-N., N.	26.1	d° a. ● a. p.
8	56.93	27	32.9	23.4	80.8	SE quad.	1	8	Ci.-S.	Variable.	9.9	● a. p. d p.
9	58.63	26.9	32.3	23.4	81.5	N quad.	1	5.2	Ci.-S.	S.-Cu., Cu.	5.4	d ● p.
10	58.21	26.7	31	23.2	85.5	Variable.	.7	5.2	Ci.-S.	S.-Cu., Cu.	1.5	
11	58.39	26.7	31.4	23.9	84.1	Variable.	.8	7.2	Ci.-S.	Cu.-N., Cu.	------	◠ a. d a. p.
12	58.96	27.5	32.5	23.7	78	Variable.	.7	4.3	Ci.-S.	Cu.-N., Cu.	------	d ◟° p.
13	59.09	26.6	30.8	21.5	87.3	N quad.	1	5.5	Ci.-S.	Cu.-N. N	------	⊽ p.
14	57.96	27.3	31.5	23.8	82.8	Variable.	.8	3	Ci.-S., A.-Cu.	S.-Cu., Cu.	------	♎ a. ⊽ p.
15	57.70	27.2	31.7	23.9	82.1	Variable.	.8	3	Ci.-S.	Cu. ENE	1	♎ a. d ⊽ p.
16	57.36	26.6	32.8	23.4	83.3	E	1.2	5	Ci.-S.	Cu.	1.3	● d° ⌐◪ p.
17	58.58	26.7	31.3	23.8	86	S quad.	1.2	7.7	Ci.-S.	Cu., N.	24.7	⌐◪ d ● p.
18	60.22	26.4	31.4	23.1	87.8	SE quad.	1	7.8	Ci.-S.	Cu., N.	11.4	d ● p.
19	59.35	26.4	31.8	23.8	86.7	E quad.	1	6.8	Ci.-S.	Cu., N.	3.6	d ● ⊽ p.
20	57.65	26.8	30.9	22.9	85.9	E, SW	1	2	Ci.-S., A.-Cu.	Cu.	------	d ⊽ p.
21	57.11	27.6	32.7	23.7	83.5	Variable.	1	1.2	Ci.-S.	Cu.	------	
22	58	26.5	31	23.8	85.6	S quad.	.8	7.3	Ci.-S.	S.-Cu., N.	1	◠ a. d ⌐◪° ◟ p.
23	59.21	26.6	31.4	23.4	85.3	N quad.	1.2	4.8	Ci.-S.	Cu. N	3.3	d ● p.
24	53.74	25.8	30	23.5	84.8	NE quad.	2.8	9.7	Ci.-S.	Cu.-N. NNE, N	22.1	⊽ d² a. ● ◞° p.
25	55.83	27.3	33.5	23	78.4	SE quad.	1	7.2	Ci.-S.	S.-Cu., Cu.	8.1	d ● ⌐◪ p.
26	56.73	26.9	30.7	23.6	85	N	1.3	3.2	Ci.-S.	S.-Cu., Cu.	------	⊽ a. ◟° p.
27	54.82	25.8	30	23.9	89	SE quad.	1	6.2	Ci.-S.	N. S	10.2	⊽ ♎ d a. ● p.
28	52.26	25.8	30.6	23	87.2	Variable.	.8	8.7	Ci.-S.	Cu.-N.	48	d° ● p.
29	50.82	26.5	29.4	24.2	88.8	S quad.	2.5	9.8	Ci.-S.	N. SSW	7.1	● a.
30	54.21	27.4	30.9	25.4	81.3	S	1.5	9.2	Ci.-S.	Cu., N.	.3	d ●° p.
Mean	756.44	26.6	30.9	23.7	85.3	----------	1.3	6.6	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	672.1	

TUGUEGARAO.

[ϕ=17° 36′ N; λ=120° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	753.33	30.4	37.5	24.5	74.2	SE	0.7	6.7	Ci.	S.-Cu. SW	------	♎ a.
2	53.47	28.8	36.3	23.7	72	SE	1.3	7.3	Ci.-S.	S.	------	♎ a. ◯² ⌐◪ p.
3	53.22	29.4	37.1	22.5	74.8	SE, NE	.8	6.2	Ci.	Cu. SW	------	♎ a. ⊤ ⌐◪ p.
4	53.02	28	36.4	23.8	80.5	SE, NW	1	8	Variable.	Cu. SSW	33.1	♎ a. ⌐◪ d ●² p.
5	52.93	26.3	31.4	24	88.6	NW, SE	.3	9.5	----------	N.	2.8	d ● ◟ p.
6	53.03	26.8	22	24	85.1	SE	.5	9.3	A.-S.	Variable.	------	d p.
7	54.30	27.9	36	23.3	81.7	Variable	.5	8.2	Ci.-Cu. SE	Cu. S, N	9.1	♎ a. d ⌐◪ ● p.
8	57.15	27.7	35.5	23	83.5	SE	.3	7.8	Ci.-S.	Cu., Cu.-N.S, WNW	12.2	d a. ◠ ● ◟ p.
9	58.58	27	34.8	22.6	84.2	NW	.7	6.3	Ci. NW	Cu. SW	------	
10	58.19	28	34.5	23.1	82.8	SE	.2	7.5	Ci.-Cu.	Cu.-N. SE	------	♎ a. d p.
11	58.22	27.2	34.2	23.7	86.3	NW	.7	6.8	Variable.	Cu.-N. NE	------	♎ a. ⌐◪ p.
12	59.11	28.6	35.4	23.8	79.5	SE	.8	7.2	Ci., Ci.-Cu.	Cu. S	------	♎ a. ⊽ ◟ p.
13	59.40	27.2	33.6	23.4	79.5	NE	.3	7.8	Ci.-S.	Cu.	------	♎ a. ∪² p.
14	58.78	26	31.5	23	89	SE	.7	6.8	Ci.	Cu.-N. S	------	♎ d a.
15	58.50	27.4	35.1	22.6	81.5	SE	.5	4.2	Ci.-S.	Cu. S	------	♎² ≡² a.
16	58.41	26.3	33.8	22.2	84.4	SE	1.2	6.7	Ci.	Cu.-N. SE	------	d a. ◡ p.
17	59.06	26.9	33.2	22.5	84.3	SE	.2	6.2	Ci., A.-Cu.	Cu., N. WSW, SE	------	♎² ≡² a. ◟ p.
18	59.81	26.7	34.7	23.4	86	NE, NW	.7	8.7	Ci.-S.	Cu.-N. N	13.9	♎ a. ● p.
19	59.51	26.5	32.3	23.3	88.2	NE	.2	8	Ci.-S.	Cu.-N. N	------	● a.
20	58.20	28.2	34.8	23.5	80.3	SE	1	5.7	Ci.	Cu. SE	------	♎ a.
21	58.44	27.2	34.9	22	82.2	NE	.5	3.5	----------	Cu.-N, Fr.-Cu. NW, ESE.	2.3	♎² a.
22	59.16	26.8	32.6	23.4	87.5	SE	.8	9	Ci.-S.	Cu.-N. SE	------	● a. ⊽ p.
23	58.87	27.8	34.2	23.1	82.3	NE, NW	.7	6.2	Ci.	Cu. N	3.8	♎ a. d p.
24	52.58	------	------	------	------	NE, NW	2.8	9	----------	N. NW	95.6	● a. ●² ◞² p.
25	56.56	26.4	32.6	22.5	86.6	NE	.3	6.8	Ci., Ci.-S.	N.-Cf., S.-Cu. E, SSE	------	
26	56.94	26.4	32.7	22.8	87.5	NE	1	5.3	Ci.	Cu.-N. N, NE	------	d a. ◟ p.
27	54.96	26.8	32.7	22.7	85.2	NE	.7	6.8	Ci.-S.	Cu. WNW	------	♎² ≡² a. ◟ p.
28	51.46	27.6	34.5	23.4	87.2	SW	.7	8.2	Ci.-S.	Cu.-N., Cu.	6.9	♎ a. ● p.
29	51	28	33.4	24.1	82.8	SE, SW	2.3	7.2	----------	S.-Cu. S	------	
30	54.23	28.7	34.3	24	81	SW	1.7	7.2	Ci.-S.	S.-Cu., Cu.-N.	------	♎ a. ◟ p.
Mean	756.35	27.5	34.2	23.2	83.1	----------	.8	7.1	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	179.7	

METEOROLOGICAL DATA, ETC.—Continued.

APARRI.

[ϕ—18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km.p.h.*	*0–10.*			*mm.*	
1	753.15	28.9	32.2	25.1	70.1	S, SW	16.1	6.3	A.-Cu. W	S.-Cu. W	------	
2	53.17	29.4	33.5	25.9	66.7	S, SW	18.2	3.8	A.-Cu. E	S.-Cu. SW	------	☇ p.
3	53.16	28.8	33.6	24.6	71.2	S	14.7	5.2	Ci. E	S.-Cu.	------	☇ p.
4	52.72	28.4	33	25.6	73.2	S	14.1	8.7	Ci.-S., Ci. NW, E	S.-Cu. W	------	⊤ ☇ p.
5	52.66	26.5	29.8	24.6	84	S, SW	14.1	9.5	Ci.-S.	S.-Cu. SW	5.9	● p.
6	52.92	25.4	27	23.5	88.3	S	9.3	10		S.-Cu. SW	4.9	● a. p.
7	54.37	26.4	30.9	23.5	85.1	SW	7	9.5	A.-Cu. W	N W	13.5	● a. p. ⊤ p.
8	57.38	26.8	31.8	23.6	85.8	S	11.6	7.3	A.-Cu. NW, E	S.-Cu. SW	.5	≡ ● a. ⌐☇ ●° p.
9	58.76	26.8	32.6	22.5	83.7	Variable	11.6	6.7	A.-Cu. SE, S	Cu.-N. NE	2.8	⌐☇ ●° p.
10	58.51	26.6	31	23.5	87.3	Variable	5	8.5	Ci.-S.	Cu.-N. NE, E	------	● a. ☇ p.
11	58.42	27	31.7	24	83	S	9.8	8	A.-Cu. W	S.-Cu. W	------	○ a. ⌐☇ p.
12	59.14	27.6	33.4	23.6	81.7	Variable	9.9	10	Ci.-S., A.-Cu. E	S.-Cu. SE	------	☇ p.
13	59.53	28	33.1	24.4	79.2	Variable	6.1	4.5	Ci. N	S.-Cu. NW	------	☇ a. ∞ p.
14	58.90	26.4	30.9	23.9	85.7	S quad.	5.7	3.5	Ci.-S. SW	Cu.-N. E	14.2	Ω ◠ ● ⊤ a.
15	58.54	27.3	32.6	23.6	79.8	S, E	10.1	1.2		Cu.-N. S	------	Ω a.
16	58.35	27	32.3	24	81.9	S	6	4.5	Ci.-S. SW	Cu.-N. SE	.3	⊤ Ω d p.
17	59.26	26.6	31.6	23.2	84.2	S	8	6.7	Ci.-S., A.-Cu. E	Cu.-N. SE	3.8	Ω ● a. ⊤ ☋ p.
18	60.10	27.1	32	23.5	83.5	Variable	10.5	5.5	Ci.-S. W	S.-Cu. W	46.2	● ⌐☇ p.
19	59.59	26.8	32	23.5	85.2	Variable	7.5	6.5	Ci.-S. W, E	Cu.-N. S, N	------	p° p.
20	58.38	27.3	32	24.1	79.8	Variable	10	.3		Cu. S	------	Ω a.
21	58.63	27.3	32.5	23.9	78.5	Variable	9.8	.3	A.-Cu. E	Cu.-N.	------	Ω a. ⊤ p.
22	59.31	26.5	31.1	23.4	80.2	E, SE	6.2	4.5	Ci., Ci.-S.	Cu.-N. SE	1.3	● p.
23	59.31	27.1	32.4	23	79.7	Variable	9.2	3.5	Ci. NW	Cu. E	50.3	☇ ● p.
24	55.35	25.7	28.9	23.1	87.5	NW, E	32	8.5		S.-Cu. N	23.6	☇ a. ↙° ● a. p.
25	56.72	27.3	31.5	23.1	79.7	E quad.	9.3	3.2	Ci. W	S.-Cu.	------	☇ p.
26	57.35	26.5	29.9	23.5	86.3	Variable	7.7	5.7	Ci. NE quad.	Cu.-N. N	7.6	● a. p.
27	54.82	26.8	31.1	23	84.5	Variable	6.3	8.2	Ci. SE	Cu.-N. SW	------	● a.
28	51.26	25.9	28.7	23.6	88.1	Variable	10.7	10	Ci. E	S.-Cu.	2.5	● ☇ p.
29	51.01	27.1	32.6	24.1	82.7	SE, S	11.2	8.5	Ci.-S.	S.-Cu. S	------	☇ p.
30	54.46	27.2	33	24.3	82.8	S	13.3	8.8	A.-Cu. S	S.-Cu. W	52.4	☇ ⌐☇ ● p.
Mean	756.51	27.1	31.6	23.8	81.6	----------	10.7	6.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	229.8	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[$\phi = 6°\ 03'$ N; $\lambda = 121°\ 00'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.6	21.5	95	75	10	7	------	☊ ≡° a.
2	32.2	22.2	94	77	6	9	------	☊° a.
3	32.3	21.9	94	79	4	7	24.6	●² p.
4	30.7	22.1	92	80	10	10	25.7	●² d ◟² p.
5	33	22.7	93	83	8	10	------	
6	32.3	22.4	93	77	6	7	24.1	☊° a. ● p.
7	32.1	21.6	95	80	10	10	------	d a.
8	32.8	22.6	96	85	8	8	.8	☊ ≡° ●° a. ⌐◹ p.
9	31.1	21.3	93	69	6	8	------	☊° a.
10	32.5	22.4	92	81	6	7	24.4	●° a. ⌐◹ p.
11	31.7	21.9	96	86	6	10	45.7	☊° a. ● ⌐◹² p.
12	31.6	21.4	94	78	10	10	------	●² d° a.
13	29.6	21.5	97	77	7	8	------	⌐◹² d ◠² ◔² p.
14	30.4	21.4	94	75	7	8	------	☊² a. ◠² ◔² p.
15	33.3	21.9	94	79	7	8	------	☊ a. ⌐◹ d ◡² p.
16	29.3	21.9	93	89	10	6	------	☊ d a.
17	30.5	21.4	96	98	6	6	29.2	☊ ≡° a. ●² p.
18	32.5	21.6	97	93	5	7	------	☊ ≡ a. ⌐◹ p.
19	31	21.1	96	77	7	6	------	☊ ≡° a.
20	29.4	22.5	92	85	6	10	10.4	● p.
21	30	20.6	97	72	4	6	10.2	☊° ●° a.
22	31.5	22.2	97	86	7	5	18.8	☊ ≡° a. ● p.
23	31.7	21.4	97	81	8	6	------	
24	30	21.8	97	94	6	7	------	≡° a.
25	30	21.4	96	92	10	6	------	≡° a.
26	29.8	21.2	95	83	8	10	------	☊ ≡° a.
27	31.2	21.9	94	78	7	10	------	☊ a.
28	31.3	22	96	90	10	10	22.9	●² a.
29	31.6	22.3	88	88	7	10	------	d p.
30	32.9	21.1	95	71	6	8	------	☊ ≡° a.
Mean	31.4	21.8	94.6	81.9	7.3	8	------	
Total	------	------	------	------	------	------	236.8	

ISABELA, BASILAN.

[$\phi = 6°\ 42'$ N; $\lambda = 121°\ 58'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	22	96	84	10	10	4.4	☊ a. ● p.
2	33.3	22	97	88	9	10	1.5	☊ ◠ a. ● p.
3	30.3	22	97	85	4	7	13.7	☊ p² a. ● p.
4	31.8	21.8	96	84	10	10	8.9	☊ ● a. p p.
5	29.3	22.5	96	82	10	10	20.8	☊ a. p ● p.
6	31.8	22	97	84	10	10	6.4	● a. p.
7	30.8	21.5	98	88	10	10	22.4	● a ●² p.
8	31.3	22	96	88	10	10	1	●° a. p.
9	30.3	22.5	91	78	10	8	3.3	☊ a. d p.
10	31.3	22	100	85	10	10	41.7	● a. d p.
11	30.3	21.5	96	88	10	10	38.9	☊ a. ●² p.
12	30	22	96	77	10	10	9.9	●² a. ● p.
13	29.8	22	98	83	10	10	18.6	☊² ●² a.
14	28.3	23	97	90	9	10	1.5	☊ ● a.
15	31.6	23.6	100	82	10	10	8.6	☊ d a. ⌐◹ ● p.
16	29.3	23	92	92	10	10	3.6	d a. ● a. p.
17	28.8	21.9	91	90	10	10	27.2	☊² a. ● a. p.
18	32.3	22.5	96	75	2	5	------	☊ a.
19	30.3	23.5	96	85	10	6	20.1	☊ a. ⌐◹ ● p.
20	29.3	23	95	87	10	10	.3	● a. d a. p.
21	29.3	21	96	96	4	10	11.2	☊ ● a. ● ◠ p.
22	30.8	21.5	98	81	10	10	26.4	☊ ● a. d ⊤ p.
23	29.8	22	97	84	10	10	8.9	● a. p p.
24	29.3	22.1	96	92	10	10	3.6	☊ p a.
25	28.8	22.5	96	85	10	10	3.8	d a.
26	28	23	96	81	10	10	12.2	● a.
27	28.8	22	96	88	10	10	37.6	☊ ● a. ●² p.
28	29.3	21.5	96	81	10	10	7.6	● a. ◞° ●° p.
29	29.8	22	96	88	10	10	3.6	● a. ●° p.
30	30.1	21.2	96	88	10	10	.5	☊ ⊤ d a.
Mean	30.2	22.2	96.1	85.3	9.3	9.5	------	
Total	------	------	------	------	------	------	368.2	

ZAMBOANGA.

[$\phi = 6°\ 54'$ N; $\lambda = 122°\ 05'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	23.4	91	71	10	7	------	☊° a.
2	30	23.5	87	71	3	9	------	
3	30.5	23.2	85	72	9	8	------	○ p.
4	30.5	23.5	84	69	10	4	------	
5	31	23.4	88	81	10	10	18.8	⌐◹ d ● p.
6	30.1	23.5	91	76	10	10	------	
7	30	23.9	96	74	10	6	3.1	d a.
8	29.5	23.9	97	77	10	10	------	● ◠ a.
9	29	23	86	78	8	7	13	d ● a.
10	28.7	23.2	96	79	10	10	------	● d ◠ a.
11	30.5	22.9	90	70	8	4	25.4	☊° a.
12	29.5	22.5	97	72	10	10	2.8	● a.
13	29	23.1	90	77	9	8	.5	
14	29	23	95	77	9	8	------	● d a.
15	29.1	23	92	74	10	9	11.2	d a. ● p.
16	29	22.9	95	78	10	10	4.6	● a. ●° p.
17	30.1	22.9	93	78	10	7	------	◠ a.
18	31.5	23	88	75	4	5	------	☊° a.
19	29.5	23.4	88	78	10	3	3.8	◟ p.
20	28.2	23	89	77	10	6	3.1	● a. p.
21	29.4	22.5	88	78	7	10	.5	☊ a. d ⊤ p.
22	31.4	23	90	71	9	3	10.2	
23	29.5	22.8	97	72	10	2	------	● a.
24	27.7	22.9	86	80	10	10	------	
25	29	23.6	87	76	10	8	------	
26	27.9	22	78	92	10	10	44.2	●² a. d p.
27	28.8	22.6	95	82	9	10	------	d p.
28	29	24.9	84	78	8	10	.8	⌐◹ a. p. ●° p.
29	29.1	22	91	70	7	10	4.6	● a.
30	30.2	22.9	88	79	10	10	------	
Mean	29.6	23.1	90.1	76.1	9	7.8	------	
Total	------	------	------	------	------	------	146.6	

DAVAO.

[$\phi = 7°\ 01'$ N; $\lambda = 125°\ 35'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	22	92	61	5	6	------	
2	32.7	21.6	92	57	5	5	------	
3	32.9	22.5	91	63	6	6	9.9	● p.
4	31.8	21.3	94	69	5	6	------	
5	31.2	21.1	95	72	5	5	------	
6	32.3	22.4	93	65	6	5	------	
7	32.2	22.6	97	65	5	6	------	
8	31.5	22.7	97	65	5	6	12.2	● p.
9	30.3	22.2	97	70	7	6	------	
10	32.3	22.9	97	70	5	5	21.1	● p.
11	28.7	22.4	97	83	7	8	25.9	●² ⊤ p.
12	32.2	21.6	97	68	6	5	------	
13	31.5	21.9	96	65	6	7	19.3	● p.
14	30.9	21.5	98	69	5	5	------	
15	31.3	22	96	68	5	5	9.1	● p.
16	28.3	21.5	96	85	8	9	------	
17	31.2	21.8	97	64	6	5	34	●² ⊤² p.
18	31.8	21.3	99	64	6	6	14.5	● ⊤² p.
19	31.3	21.7	96	67	5	6	23.6	● ⌐◹ p.
20	30.2	21	96	75	5	7	------	
21	31.7	21.1	96	61	6	7	36.6	●² ⌐◹² p.
22	31.7	22.5	97	66	5	6	------	
23	31	22.1	94	64	5	6	------	
24	30.1	21.6	95	70	5	5	23.1	● ⌐◹² p.
25	31.3	21.9	96	72	6	8	14.7	● p.
26	31.3	22.1	96	70	6	5	15.7	● p.
27	31.2	22	97	64	6	7	------	
28	31.5	22.1	97	64	5	6	------	
29	30.2	21.5	96	69	7	6	------	
30	31.7	21.1	98	69	5	7	------	
Mean	31.3	21.9	95.8	67.8	5.6	6.1	------	
Total	------	------	------	------	------	------	259.7	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.9	20.5	91	60	3	4	------	☾ d p.
2	32.1	20.6	96	64	8	5	41.4	≡° a. ☾ ●² p.
3	32.8	19.5	98	68	9	7	------	≡° ☊° a. ☾ p.
4	31.3	21.6	96	64	10	7	------	∞ p.
5	31.6	21.8	96	68	10	10	3.3	☊° ≡° a. ●° p.
6	31.6	22.5	96	72	10	9	------	≡° a. d p.
7	32	22.3	95	67	5	4	3	≡° ☊° a. d ☾ p.
8	30.9	22.2	94	70	10	10	2	☾° d p.
9	31.7	22.2	95	69	10	7	------	≡° ☊ a. ☾° ●² p.
10	30.6	21.6	97	72	8	8	1.3	≡° ☊° a. d ☾ p.
11	31.6	22.4	97	59	10	9	1.3	≡° ☊° a. d p.
12	32	23.5	95	64	9	9	------	≡° a. ⊕² ☇ ☋ p.
13	31.3	23.4	94	74	8	8	28.4	☊ ⌒ a. ● p.
14	30.9	22.4	97	65	6	5	49.8	≡° ☊° a. ∞ ● p.
15	30.7	22.4	96	69	10	4	.5	≡° ☊° a. d p.
16	29.9	22.6	96	70	10	10	7.4	≡° ☊ a. ● d p.
17	31.4	21.7	97	62	10	5	------	≡² ☊° a.
18	32.4	22.9	96	58	3	8	15.2	≡° ☊° a. ☾ ● p.
19	31.9	21	97	64	4	7	31	≡ ☊° a. ☾ ● p.
20	29.4	20.9	96	77	10	6	.5	☊° a. d p.
21	30.6	22.4	96	83	9	8	2.1	d p.
22	31.5	22.9	95	64	3	6	8.9	≡° ☊° a. ● ☇ p.
23	31.8	23	96	71	3	5	39.1	☾ ● p.
24	30.3	20.3	96	73	3	6	3.3	≡° ☊° a. d p.
25	30.5	22.4	97	71	10	7	5.6	≡° ☋ a. d p.
26	30.4	23	96	70	10	7	6.6	d a.
27	29.3	23	98	75	7	9	1.3	≡ ☊ a. d a.
28	29.8	23.1	95	70	10	9	29.5	≡° ☊° a. p ● p.
29	31	22.6	96	69	6	8	6.9	≡° ☊° a. p p.
30	31.4	22.7	96	66	4	3	------	≡° ☊° a.
Mean	31.2	22.1	95.9	68.3	7.6	7	------	
Total	------	------	------	------	------	------	288.4	

CAGAYAN, MISAMIS.

[ϕ=8° 29′ N; λ=124° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.3	22.2	88	62	10	7	------	☊ a. ☾° p.
2	31.6	22	90	60	9	9	------	☊ a. ☾° p.
3	32.2	23.1	92	57	7	8	------	☊ a.
4	31.3	21.9	92	65	8	9	10.2	☊° a. ● p.
5	31.2	22.2	92	65	10	9	.5	d° ☾° p.
6	32.7	22.9	87	67	10	7	------	d° a.
7	33	22.9	92	61	7	7	------	●° p.
8	31.2	22.1	95	65	10	8	(?)	☇ ☾ ● p.
9	32	22	93	60	10	9	------	☇° p.
10	31.1	23.1	94	69	4	5	------	☊ a. ☾° p.
11	31.2	22.5	93	71	4	6	------	☊ a.
12	32.3	23	93	69	4	4	------	☊° a. ☇° p.
13	31.4	22.4	94	65	3	6	15.2	☊ a. ● p.
14	31.8	21.8	93	64	5	7	7.6	☾ ● p.
15	31.8	22.7	96	68	3	8	------	●° p.
16	------	------	------	------	------	------	------	
17	------	------	------	------	------	------	------	
18	------	------	------	------	------	------	------	
19	------	------	------	------	------	------	------	
20	------	------	------	------	------	------	------	
21	------	------	------	------	------	------	------	
22	------	------	------	------	------	------	------	
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
Mean	31.8	22.5	92.3	64.5	6.9	7.3	------	
Total	------	------	------	------	------	------	------	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.8	24.6	87	66	7	8	------	☊ a. ⊤ ☇ p.
2	33.5	24.9	87	65	6	5	------	☊ a.
3	32.7	24.7	86	67	7	8	------	☇ p.
4	32.4	24.2	87	68	7	7	1	☊ a. ●° ☇ p.
5	33	24.5	89	67	8	6	2.3	☊ a. ● ⊤ p.
6	32.2	24.8	90	71	10	8	------	
7	33.5	24.3	90	80	6	4	------	☊ a. ⊤ ☇ p.
8	30.8	24	88	72	8	7	------	⊤ ☇ ○ p.
9	31.2	23.9	88	75	10	7	10.9	d a. ⊤ ☇ ☋ p.
10	29.7	24	87	79	7	10	3	● ☾ a. ● ☇ p.
11	30.8	23.7	87	73	8	8	------	⊤ ☇ ○ p.
12	30	23.4	86	73	8	9	4.6	● ⊤ p.
13	30.4	23.6	87	76	8	6	2.8	● a. p. ○ ☇ p.
14	30.9	22.6	90	64	10	7	31.5	∈ ⊕ ⊤ ☇ p.
15	29.9	22.1	89	72	10	10	52.6	● a. ○ ☋ ☇ p.
16	31.6	23.3	93	70	10	8	------	⊤ ☋ ⊤ p.
17	31.2	23.4	91	70	9	9	2	● ☋ ∈ ⊕ ☇ p.
18	31.8	22.7	90	71	7	6	3	☊ a. ○ ⊕ ∈ p.
19	31	22.4	89	78	10	8	30.2	● a. ☇ p.
20	31.5	22.1	90	71	10	7	------	● ☾ a. ☇ p.
21	32.2	22.2	87	74	8	10	------	
22	33.4	22.6	87	72	9	5	4.3	☾ p.
23	33.1	24.2	88	75	9	3	------	● a. ☇ d p.
24	32.4	23.5	89	73	10	8	.5	⊤ a. ○ p.
25	31.4	23.4	86	76	10	10	------	●° a. ○ p.
26	31	23.3	86	71	10	10	4.8	○ ● ☇ p.
27	31.1	23.3	95	72	10	9	------	○ ☇ p.
28	30	23.6	86	71	7	10	------	☊ a.
29	32.1	22.9	90	63	3	9	4.1	● ⊤ p.
30	31.7	23.2	89	68	7	4	------	☇ p.
Mean	31.7	23.5	88.5	71.4	8.3	7.5	------	
Total	------	------	------	------	------	------	157.6	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.6	23.1	91	65	8	8	------	⊕ a. ☇ p.
2	32.6	23.6	94	63	5	7	------	☊ a.
3	31.8	23.7	94	61	5	7	1.5	☊ a. ☾ ● p.
4	31.5	22.6	90	62	9	7	.8	☊ a. ☾² ●° p.
5	30.6	23.2	93	68	10	10	------	☊ a.
6	31.5	23.5	91	71	10	8	3.3	☊ a. ⌒ ☾ ● p.
7	31.5	22.9	97	59	7	7	1.3	☊ a. ⊤ ☇ p.
8	31.7	23	95	67	8	8	------	● a. ☾ p.
9	30	23	93	74	8	9	.3	●° ⊕ a. ☾ d p.
10	31.5	23	94	71	9	8	3	☊ a. ☾ ● p.
11	31.1	22.4	93	62	7	7	7.6	● a. p. ☇ ☋ p.
12	29.8	22.8	98	73	10	8	10.7	☊² a. ● ☾ p.
13	30.6	23	93	89	9	9	7.1	☊² a. ☾ ● p.
14	29.8	23.2	96	77	8	10	42.4	☊² ≡° a. ☾ ● p.
15	------	22.4	99	86	9	9	.3	☊² a. d p.
16	------	------	------	------	------	------	.8	● p.
17	32	------	97	60	1	6	23.6	☊ a. ●² ☾ ☾² p.
18	30.5	22.1	96	70	4	7	------	☊ a. ☇ p.
19	30	22.4	94	73	5	8	3	☊ a. d a. p.
20	29.5	24	92	73	9	9	26.9	● a. ●² ⊤ p.
21	31	21.9	93	69	8	7	.3	☊ a. ⊤ ● p.
22	31.8	22.6	95	76	6	9	------	☊ a. ⊤ d ☇ p.
23	30.2	22.5	96	65	2	8	.5	☊ a. ⊤ ●° p.
24	29.6	22.5	94	76	7	10	------	● a. ⊕ ☇ p.
25	29.7	23.2	95	79	8	10	1.3	☊ a. ⊤ ☇ ●° p.
26	30.1	23.4	95	76	7	7	26.9	☊ a. ● ☾ p.
27	30.3	23.6	94	76	8	8	19	☊ a. ● p.
28	30	23.5	96	77	9	10	3.8	☊ a. ● p.
29	31	23.1	91	75	7	8	1.5	☊ a. ⊤ ●° ☇ p.
30	30.3	22.6	96	57	6	5	------	☊ a. ☇ p.
Mean	30.8	23	94.3	70.7	7.2	8.1	------	
Total	------	------	------	------	------	------	185.9	

METEOROLOGICAL DATA, ETC.—Continued.

DUMAGUETE.

[ϕ=9° 18′ N; λ=123° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34.4	22.5	82	44	10	10	------	☽ a. ☾ p.
2	33.9	23.5	85	48	8	10	------	♌° ☾ p.
3	33.5	23.7	88	59	10	10	8.6	● p.
4	32.5	23.2	88	64	10	10	1	♌ a. p ☾ p.
5	33.2	23.8	82	69	10	10	------	
6	33.2	24.2	79	72	10	10	------	
7	32.9	23.5	80	67	10	9	------	♌ a. ☾ p.
8	31.3	23.6	80	71	10	10	5.1	☽ ☾ p.
9	31.3	23.5	94	72	10	10	6.6	● ☽ a. ☐ p.
10	27.8	23.3	92	83	10	10	45.2	● ☐ a.
11	30.7	23	93	68	10	6	4.1	p a.
12	31.4	23.7	92	75	10	9	21.1	● a. ☐ p.
13	31.4	23.4	95	64	10	9	11	☐ ● a. ☽ ☾ ●
14	30.8	22.8	93	70	10	10	2.8	d a. p.
15	30.2	23.2	94	73	10	10	------	d a. ☐ p.
16	30.3	23.1	85	74	10	10	------	d a. p.
17	31.8	23	85	67	8	5	7.6	d a. ☾ ●° p.
18	31.3	22.9	90	71	10	10	------	● a. ☽ ☐ ☾ p.
19	31.2	24.3	89	69	10	10	59.6	♌² ☽ a. ☐ d p.
20	30.1	22.7	95	69	10	10	3	p a. ● p.
21	31.5	22.8	89	66	10	10	------	● a. ☽ a. p. d ☾
22	30.9	23.2	90	70	10	8	9.1	☾ a. ☽ a. p. ☾ p.
23	30.8	23.7	97	69	8	6	------	☐ p a. ☾ p.
24	31.2	23.7	86	65	10	10	------	☾ a. ☐ p.
25	30.5	23.7	83	70	10	10	1.3	☐ a. ☾ p.
26	30.3	23.6	95	84	10	10	------	☐ ●° a. d ☾ p.
27	31.7	23.3	------	72	10	10	------	♌ a. d p.
28	29.2	23.5	95	84	10	10	5.7	d a. ● p.
29	32.7	22.1	86	48	10	10	------	d ◠ a. ☾ p.
30	31.2	21.2	90	71	10	8	------	♌ a.
Mean	31.4	23.3	88.7	68.3	9.8	9.3	------	
Total	------	------	------	------	------	------	191.8	

YAP (WESTERN CAROLINES).

[ϕ=9° 29′ N; λ=138° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.9	24.4	90	72	6	4	------	♌ a.
2	32.5	24.7	88	85	3	7	------	♌° a.
3	31	24.6	90	93	5	10	14.2	♌° ☿ ☾° ● °a. ● ° ☾
4	27.6	24.2	97	83	10	9	1	● d a.
5	31.4	24.2	94	79	9	7	------	♌ ☽ a.
6	31	24.4	94	79	2	7	1.8	♌² a. ● ° ◠ ° p.
7	31.9	23.6	95	72	3	5	4.6	☾ ° ● p.
8	31.4	25.4	------	79	6	8	25.1	p ☽ ⊕ ° a. ● ☾ p.
9	30.6	24.2	96	83	8	8	6.3	d a. ● ☾ ° ☿ ° p.
10	29.8	24.9	96	86	10	10	3.5	● a. ☐ d a. p.
11	32.3	24.5	94	72	3	5	23.1	◠ ☾ ² p² p.
12	31.8	23.3	89	87	10	9	45.2	⊕ ° a. ● a. p.
13	30.6	23	95	77	10	8	12.4	☾ ° a. ● a. p. ☿ ° p
14	31.4	25	92	71	6	4	30	☽ ⊕ ° a. ● a. p. ◠ °
15	31.1	24.5	86	75	8	8	.5	☽ a. ☿ ● p.
16	32	24.5	86	66	3	5	------	☾ ☿ p.
17	29.6	23.8	88	74	9	9	6.6	● ° a. p. ☿ p.
18	30.7	24.1	92	75	7	5	3	● ° ☽ ° a. ♌ ☿ ° ● p.
19	32	24	86	74	8	8	4.8	d ⊕ a. ● ◠ ° p.
20	32.4	24.4	88	72	6	6	5.8	◠ ° ☿ ° p.
21	30.8	23.7	98	93	9	10	31.3	●² a. p.
22	27.8	23.7	96	94	9	10	1.8	d° a. p.
23	31.6	23.7	94	70	8	6	10.4	☽ ° ⊕ a. ☾ p.
24	25.4	22.9	97	97	10	10	83.3	☥ a. ● a. p.
25	27.8	22.5	98	83	10	8	5.6	● a.
26	32.4	24.8	91	67	8	7	------	♌ ☽ a. ☽ ° p.
27	33	24.6	89	61	7	6	------	♌² a. ☽ ° p.
28	29.8	24.4	88	76	8	9	12.7	♌ ° ● ⊕ ° a. d° p.
29	26.9	23.3	98	86	10	10	32.2	☾ ● a. d° a. p.
30	28.2	23.3	99	83	10	10	14.5	● a. d° p.
Mean	30.6	24.1	92.6	78.8	7.4	7.6	------	
Total	------	------	------	------	------	------	379.7	

MAASIN.

[ϕ=10° 08′ N; λ=124° 50′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	25	84	75	10	10	------	
2	30.4	25	89	77	10	10	------	
3	30.5	25.2	86	77	10	10	17.5	☾ p.
4	30.5	25	85	76	10	10	------	● ☐ ² a.
5	29.6	25.4	87	79	10	10	------	
6	31	24.8	95	80	10	10	10.2	
7	30.5	23.8	89	74	10	10	7.9	● ◠ ° a. ☾ ☿ ° p.
8	30.6	25	92	75	10	10	------	☾ ☿ ° ☐ ² p.
9	30.5	24	91	76	10	10	32	p ☾ ☾ p.
10	30.4	23.6	91	78	10	10	------	p ☾ a.
11	29.7	23.6	95	78	10	10	------	
12	30	23.7	92	79	10	10	------	☿ ° ☾ p.
13	30	23.6	87	76	10	10	22.4	☥ ☾ ☾ p p.
14	29.9	23.3	95	75	10	8	13.2	☾ ☾ ● ° p.
15	29.5	23	93	83	10	10	49	d a. p. ☐ ² ● p.
16	28.6	22.8	97	76	10	9	4.6	d ≡ a. ☿ ☾ p.
17	29	23	93	75	8	10	------	p a.
18	31	23.3	95	76	10	10	6.6	☥ ² p p.
19	31.4	23.6	87	79	10	10	------	
20	31	23.4	87	92	10	10	97	● a. d ●² p.
21	31.3	22.8	90	78	10	10	------	d a. ☾ ² p.
22	29.5	23.4	88	81	10	7	------	
23	30.2	23.3	92	79	8	10	13.2	d a. p. p ☐ ² p.
24	29.9	23	97	82	10	10	------	
25	29.4	24.6	92	84	10	10	12.2	d ☐ p p.
26	29.2	24.1	96	81	10	10	16.8	◠ a. p p.
27	28.5	22.5	87	83	10	10	------	☾ d p.
28	28.8	22.4	88	74	10	10	------	☾ p.
29	29.8	22.4?	84	78	10	10	------	
30	30	22.4?	84	73	10	10	------	
Mean	30	23.7	90.3	78.3	9.9	9.8	------	
Total	------	------	------	------	------	------	302.6	

SAN JOSE BUENAVISTA.

[ϕ=10° 44′ N; λ=121° 55′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	22.5	94	81	10	10	9.2	● a. p.
2	30	24	95	79	10	8	.8	● p.
3	27.8	24.4	88	84	10	10	28	● a. ● ° p.
4	29.9	23.8	93	85	10	10	5.5	● a. p. ☾ p.
5	27	24.3	89	92	10	10	21.1	d a. ● a. p.
6	31.4	22.5	94	83	10	10	14.7	d p.
7	31.1	22.9	92	81	10	8	20.6	● a. p. ☾ p.
8	30.9	23.5	91	80	10	10	.5	● ° a. ☾ p.
9	30	23.6	88	88	10	10	1.5	☥ a. ● a. p. d p.
10	27.9	23	93	87	10	10	4.8	d ● ° p.
11	28.7	23.6	96	82	10	10	------	● a.
12	30	23.3	89	78	10	10	29	☥ ☾ a. p. ● p.
13	29.5	22	96	84	8	10	50.1	● d p.
14	29.5	22.5	95	83	10	10	19.3	d ● p.
15	29.5	22.5	93	78	10	10	24.6	● a. p.
16	27.5	23	94	84	10	10	60.9	● a. p. d p.
17	29.5	22.6	96	92	10	10	13.3	● p.
18	30.5	22.5	87	78	8	10	------	☾ ☥ p.
19	30.6	23.2	93	75	10	10	1.3	☥ a. d ☿ p.
20	29.5	22.3	84	95	10	10	29	d ● p.
21	26.8	22.5	92	92	10	10	13.2	● a. p.
22	31.4	22	89	72	3	3	------	
23	30.7	23.3	91	82	1	10	3.6	☐ ● ° p.
24	29.5	22.5	91	74	10	10	5.6	☾ ☥ ● p.
25	29.9	23	91	81	10	10	11.9	d ☥ ● ☾ p.
26	29.4	22.6	97	80	10	10	143.3	● a. ☾ ●² p.
27	27.8	22.5	95	87	10	10	98	●² a. p.
28	26	23	95	96	10	10	75.7	● a. p.
29	26.6	23.9	93	94	10	10	46.7	● a. p.
30	29	22.2	93	83	10	10	26.7	● ° a. ● p.
Mean	29.3	23	92.2	83.7	9.3	9.6	------	
Total	------	------	------	------	------	------	758.9	

METEOROLOGICAL DATA, ETC.—Continued.

CUYO.

[ϕ=10° 51′ N; λ=121° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33	24.7	90	68	9	8	1.3	p p.
2	32.7	26.6	90	75	9	9	5.6	
3	30.5	23.8	95	79	10	9	7.4	● a. p.
4	28	23.9	98	86	10	10	8.9	● a. p.
5	28.4	25.4	94	87	10	10	24.4	● a. p. ⊤ p.
6	30	23.3	97	96	10	10	5.6	⌐◹ a. ● a. p.
7	28.7	25.1	95	86	9	10	18.8	●² a.
8	31.7	24.1	91	68	10	9	3.6	●° a.
9	31.2	23.9	96	77	9	8	31.5	●° a. p.
10	30.1	24.6	96	76	10	9	18.3	●² ⊤ a.
11	30.5	22.9	97	72	10	9	.8	● a.
12	30.7	23.3	97	73	9	8	4.8	⊕ ● p.
13	30.8	23.9	96	76	8	8	4.8	d a. p. ● p.
14	30	23.5	97	76	9	8	22.1	● a. p. ⊕ p.
15	29.8	23.5	95	78	10	9	8.9	d a. p. ● p.
16	28.3	23.6	97	93	9	10	72.9	d a. ●² a. p.
17	26.7	22.7	97	93	10	10	78	●² a. ● ⌣ p.
18	31.6	22.7	98	69	8	7	------	
19	31.6	25.1	86	72	9	6	53.1	○ a,
20	29.4	23.1	97	85	10	10	53.4	⌐◹ ●²a. d² a. p.
21	26.7	23	98	96	10	10	46	●² a. ● p.
22	30.7	23.1	99	76	10	7	------	● a. d° p.
23	30	23	97	81	6	8	7.1	≡ ● a.
24	31.2	25.1	93	76	9	9	------	⊤° p.
25	31.8	24.8	94	81	9	9	30.3	●° a. ●² p.
26	30.6	23.2	97	84	10	10	81.5	d² a. ● ⊤° p.
27	29	22.6	98	87	10	9	20.1	● a. p.
28	27.4	24.3	93	87	10	10	8.2	d a. ● p.
29	29.3	24.1	92	94	10	10	27.4	● p.
30	31.2	24.1	97	80	9	9	------	d a.
Mean	30.1	23.9	95.2	80.9	9.4	8.9	------	
Total	------	------	------	------	------	------	644.8	

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	23.4	97	65	6	9	------	♌° ≡ a. ◯ p.
2	34.6	23.3	97	50	6	5	------	♌ ≡ a. ◯² ◹ p.
3	33.6	23.6	97	60	4	6	------	♌ ≡ a. ◯° ⊤ ◹
4	32	23.3	97	70	4	7	3.6	♌ ≡ a. ◹ ● p.
5	32.9	23.5	98	68	4	10	.3	● a. ⊤² ●° ◹ p.
6	33.4	23	98	70	9	8	------	≡ ◯ a. ◹ p.
7	33.6	23.2	97	66	6	3	------	♌≡a. ⊕ ⌐◹ ◹p.
8	30.6	23.6	97	71	8	6	1	♌ a. ◯² ◹ ●° p.
9	31.6	23.7	98	68	4	5	57.1	≡ ◯° a. ◹ ●²p.
10	30.7	23	98	73	7	7	30	≡◯a. ⊤ ◹ ²●²p.
11	31.5	23	98	66	3	5	14.3	≡ ●° a. ●² ◹ p.
12	30.6	23.2	97	87	10	6	15.2	≡ a. ● a. p.
13	30	23.4	98	72	9	9	20.5	● a. p. ◯ p.
14	31	22.7	96	70	8	7	.3	≡° ◯ a. ●° ⌣ p.
15	26.6	23	96	89	9	10	14.5	≡° ● a. d² ⌣ p.
16	30	22.6	97	74	7	8	1.3	● ≡ a. ●° ⊕ p.
17	31.5	22.7	96	71	4	5	------	♌ ≡° a. ⊤ ⌣ ◹ p.
18	31.6	22.8	97	68	6	5	------	♌ ≡ a ⌣ ◹ p.
19	29.5	23.2	96	77	7	9	12.2	♌ ≡ ● a. ●° p.
20	27.8	22.6	97	85	10	10	40.4	≡ ● a. ●² p.
21	30.5	22.2	95	71	10	7	2.3	≡° ●² a. ◹ ● p.
22	30.8	22.8	96	67	7	5	------	● a. ◯° ⊤ d ◹ p.
23	31.3	22.5	97	67	3	4	------	♌ ≡ a. ⊤ ◹ p.
24	32	22	96	74	6	8	8.9	♌ ≡° a. ⊤ ● ◹ p.
25	31.5	22.5	96	86	3	10	37.6	♌°≡° a ⌐◹ ²●²p.
26	31.3	22.6	96	77	2	10	83.8	●² a.p. ⌐◹ p.
27	31.5	21.4	93	69	7	7	9.2	⊕ a. ● ◹ p.
28	32.5	22.3	87	66	8	7	------	
29	32.1	22.2	96	55	7	6	------	♌ ≡° a.
30	34.5	22.4	95	57	4	5	------	♌ ≡° ◯ a. ◹ p.
Mean	31.5	22.9	96.3	70.3	6.3	7	------	
Total	------	------	------	------	------	------	352.5	

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	26.2	96?	------	9	10	------	
2	32.2	26.2	96	------	10	9	2.5	
3	30.8	24.6	97	------	10	10	3.3	
4	32	26.4	98	------	9	9	7.4	
5	29.4	25.5	98	------	9	9	7.6	
6	32.2	26.2	99	------	10	8	------	
7	32.4	24.8	97	------	10	9	------	
8	31.6?	25.5	99	------	10	9	1.8	
9	31.8	24.4	98	------	9	7	7.9	
10	32	24.4	98	------	10	9	1.5	
11	31.4	25	98	------	9	10	1.5	
12	32	25.6	96	------	10	9	------	
13	31.4	25.4	100?	------	9	9	50.8	
14	32.4	24.2	98	------	9	9	6.1	
15	30	24.5	98	------	9	10	25.2	
16	29.2	24.2	98	------	8	9	31.5	
17	30.2	23.5	98	------	8	9	5.1	
18	31.6	------	------	------	------	9	17.3	
19	31	24.2	98	------	10	9	1.5	
20	31.5	25.2	99	------	8	9	77.5	
21	26.5	23.6	97	------	10	10	40.9	
22	30.5	22.8	99	------	8	8	1.8	
23	33	24.6	99	------	6	9	------	
24	31.2	25	99	------	10	9	------	
25	32.4	25.8	98	------	10	9	3.6	
26	30.2	23.6	98	------	10	9	1	
27	29.8	24.6	98	------	10	8	------	
28	30	25.4?	98	------	10	10	14.2	
29	28.5	25.6	98	------	8	9	------	
30	31	25.8	97	------	8	8	------	
Mean	31	24.9	97.9	------	9.2	9	------	
Total	------	------	------	------	------	------	310	

SUMAY, GUAM (LADRONES ISLANDS).

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	24.6	92	75	8	10	11.9	
2	31	23.8	92	89	4	10	66	
3	29.4	23.2	83	73	10	10	14	
4	30.2	23.4	86	70	6	10	3	
5	30	23.2	92	78	10	7	5.1	
6	31.4	24.4	87	61	4	7	------	
7	31	24	84	65	4	5	7.6	
8	30.4	24.2	87	71	10	10	.8	
9	29.6	26.2	84	77	10	8	4.3	
10	30	24.4	86	74	4	10	1.5	
11	31.4	24.4	89	70	5	5	11.4	
12	31	25.6	84	65	3	6	1.3	
13	29.2	25	89	78	6	10	3.8	
14	30.4	23.8	86	77	10	10	15.2	
15	30	24	92	80	10	10	12.7	
16	30.4	24.8	84	64	2	6	7.6	
17	30.8	24.6	93	65	10	10	------	
18	30.8	24.4	86	74	10	10	------	
19	29	23.4	88	69	6	10	1.5	
20	31	23.6	92	70	6	8	3.8	
21	30.8	23.6	95	70	10	5	15.2	
22	29.2	23.8	89	88	2	10	14.2	
23	29	23	92	80	10	10	2.5	
24	29	23.4	89	89	3	10	78.7	
25	30	23	92	69	10	10	15.2	
26	30.6	23.8	93	71	10	10	5.1	
27	30.8	25.4	90	70	10	10	12.7	
28	30	24.4	90	67	10	4	1.3	
29	30	24.2	92	72	10	10	------	
30	30.8	25.2	86	76	10	8	2.5	
Mean	30.2	24.2	88.8	73.2	7.4	8.6	------	
Total	------	------	------	------	------	------	318.9	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34	23	94	62	10	10	------	◠° p a. d p.
2	34.5	24.7	92	60	10	10	------	d a. ●° a. p.
3	32.7	24.1	88	66	10	10	------	
4	31	24.4	93	79	10	10	6.6	
5	30.7	23.6	94	83	10	10	4.3	
6	32.2	23.1	96	67	10	10	------	
7	32	24	94	67	10	10	------	
8	31.4	23.8	91	75	10	10	------	
9	32.1	22.9	92	67	10	10	------	◪ p.
10	31.9	23.4	91	72	10	10	8.9	┬ p p.
11	29	23	97	78	10	10	13.5	●° p.
12	29.6	23	95	73	10	10	6.6	d ●² a. p p.
13	31.8	22.7	97	66	10	9	29.6	p² a. p.
14	30.2	23	98	70	10	10	3.3	●² p.
15	29.5	22.7	94	74	10	10	27.9	p² a.
16	29.2	23	97	76	10	10	5.6	p a. ◪ ●² p.
17	30.6	22.4	97	95	10	10	10.4	p a. ◪ ● p.
18	31.1	22.7	95	71	10	10	2.8	┬ p² d° p.
19	31.5	23	96	70	10	9	6.9	≡° a. ◪ ●° p.
20	30.5	23.5	97	74	10	8	14.2	≡° a. ◪ ●° p.
21	------	23.1	98	92	10	10	16	≡●° ◠° a. ● p.
22	30.1	22.5	97	72	10	10	3.8	●° ┬ a. p.
23	31.4	22.1	97	75	9	9	1	p p.
24	31.1	21.6	------	74	10	10	------	≡ a. ┬ p p.
25	31.1	22.4	92	77	10	10	------	◡ ◔ a. ↙° p.
26	30.8	24	91	72	10	9	4.1	◪ p.
27	30.9	22.5	96	76	10	8	------	◪ ● p.
28	31.3	23	96	69	10	10	3	◪ p.
29	29	23	97	92	10	10	20.6	d a. p.
30	31.7	23.5	97	67	10	10	3.3	d² ● p.
								◠° a. p p.
Mean	31.1	23.1	94.8	73.7	10	9.7	------	
Total	------	------	------	------	------	------	192.4	

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	24.6	94	65	10	10	------	◟ p.
2	32.2	24.5	92	65	10	10	------	◟ p.
3	31	24.8	84	74	8	10	3.6	● a. ◟ p.
4	32.3	24	88	70	9	8	------	◪ d° p.
5	29	25	88	85	8	10	2	● a. p.
6	33.2	24	92	65	10	8	------	d° a. ◟ p.
7	33	23.8	92	74	9	9	.8	☊ a. ●° ◪ p.
8	32.5	23.9	92	84	10	10	2.6	┬ ●° ● ◟ p.
9	31.9	22.5	96	68	7	7	2	◟ p.
10	32.3	23.5	94	70	9	6	------	●° a. ◟ p.
11	31.5	25	81	76	8	8	11.4	◟ p.
12	32	24	93	71	10	8	6.9	● a. ◠° p.
13	29.9	23	95	89	9	10	15	●² ◠ a. d p.
14	30.2	22.4	96	75	7	8	22.1	● ◠ a. ●² ◟ p.
15	28.8	24	94	88	9	9	19.3	● a.
16	29.4	23.9	92	84	10	9	27.7	● a. p.
17	31.4	23.4	96	68	7	7	------	●° a.
18	30.9	23.3	98	79	9	8	------	d° a. ◟ p.
19	31.6	22.3	94	80	10	8	------	◟ p.
20	32	22	96	86	5	10	11.7	● ↙° p.
21	29.8	24	86	85	10	10	40.9	↙° a. ● a. p.
22	31.6	22.4	96	67	6	6	------	◟ p.
23	31.9	22	95	80	4	7	3.3	☊ a. ● ┬ ◠ ◟ p.
24	31.7	23	97	73	10	8	------	☊ a. ◟ p.
25	31.9	23.4	97	78	7	10	6.4	● a. p. ◪ p.
26	31.4	23.5	95	81	10	8	32.6	● ◟ p.
27	32	23.5	95	67	9	7	1.3	● ◠ ◪ p.
28	31.5	24.4	96	67	9	8	------	
29	31.7	24.5	80	73	9	9	------	
30	32	24	85	77	6	7	------	
Mean	31.4	23.6	92.3	75.5	8.5	8.4	------	
Total	------	------	------	------	------	------	209.6	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	25.1	85	66	10	10	------	d a.
2	33.3	25	86	61	9	9	------	
3	32.8	24.6	86	71	9	10	2.5	●° p.
4	32	24.4	92	71	9	10	3	●° p.
5	31.4	23	93	71	10	9	6.5	● a. p.
6	33.3	23.4	92	63	9	9	------	
7	32.6	24.1	95	65	10	10	------	
8	------	23.5	97	92	10	10	4.3	●° a. p. ┬° p.
9	33.3	21.9	98	58	10	8	5.6	≡ a. ● p.
10	32	22.2	98	72	9	10	------	d a.
11	33	22.3	98	74	8	9	------	
12	31.3	22	97	76	10	9	------	
13	30.7	21.7	97	90	6	10	33.3	● a. d p.
14	33.9	21.8	97	89	8	9	28.1	● ┬° p.
15	30.9	22.1	98	78	10	10	18	d ● a.
16	31	22.1	98	66	10	10	8.3	● a.
17	33	22.1	98	56	10	8	6.6	●° a. p.
18	32.4	22.4	98	83	9	9	31.3	● p.
19	32	21.5	96	63	10	8	4.6	●° a. p.
20	32.7	21.5	97	69	5	8	9.7	┬° ●° p.
21	28.1	21.7	98	76	10	10	22.9	●° a. ● p.
22	33.4	21.4	98	66	8	8	16	● ◪ p.
23	32.5	22.6	97	65	7	9	------	
24	31.9	22.1	98	68	10	9	6.7	● ◪² p.
25	33.3	22.6	97	67	10	9	58.4	● a. ●² ┬° p.
26	31.4	22.4	98	86	10	10	75.4	●² ┬° p.
27	31.4	22.6	99	93	10	10	3.3	●° p.
28	31.6	22.6	98	73	10	9	41.9	● a. p.
29	30.5	22	95	78	9	10	4.2	●° p.
30	31	23.5	96	74	10	8	------	
Mean	32	22.7	95.7	72.7	9.2	9.2	------	
Total	------	------	------	------	------	------	390.6	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	24.5	78	66	6	7	------	◔ a. ↙° ◟ p.
2	32.9	25.6	73	62	4	8	------	↙° a. p. d p.
3	31.7	25.5	86	70	7	8	.1	↙ ◠° d° a. p° p.
4	30.1	23.5	94	81	9	10	7.4	● a. d° a. p. ↙° p.
5	29.3	24.3	89	89	9	10	5.6	d. a. p. ● p.
6	31.8	23.4	97	72	9	8	1.8	d° a. ◪ ● p.
7	32	23.8	97	74	8	6	------	
8	32.5	22.3	97	68	8	7	42.9	☊° a ◪.² ●² p.
9	31.6	23.3	98	75	8	7	1	d a. ◪ ● p.
10	31.8	22.9	97	70	6	8	1.3	☊° a. ◟ p.
11	29.5	23.1	99	81	9	9	1.8	● a.
12	32.4	23.3	97	71	7	8	7.9	● a. p. ◟ p.
13	31.4	22.3	97	85	6	8	3.3	● a. p.
14	30.5	23.3	97	77	9	7	33.3	●° a. ◪ ●² ◡ p.
15	29	22.8	97	78	10	10	.5	● a. ◟ p.
16	30.4	23.3	97	81	9	10	12	d a. ┬° ●² p.
17	31	22.8	99	75	10	8	3.3	d° a. ● a. p.
18	31.7	22.5	98	75	6	5	1	◪ ●° p.
19	30.8	22.9	97	73	10	9	1.6	d° a. ◪ ●° p.
20	31.9	22.3	97	74	8	6	------	◠² a.
21	29.2	22.6	97	97	5	10	72.7	d° a. ●² ┬° a. p.
22	30.9	21.6	98	75	10	10	7.9	●° ┬ p.
23	32.1	21.4	98	72	6	7	.3	d° a. ┬ ◠² d° p.
24	30.9	21.5	97	76	10	9	.5	☊° a.
25	32.3	22.9	97	78	9	8	------	● a. ↙° p.
26	32.5	22.7	98	75	7	7	5.1	┬° ◟ ●° p.
27	32.9	22.8	98	76	10	7	1.3	d a. p. ↙° p.
28	31.6	22.7	90	89	10	9	.3	↙° a. p. d p.
29	31.4	23.2	97	90	10	10	20.5	d° a. d ●² p.
30	31.8	22.7	98	82	10	10	.8	◠ ↙ a. d ◟ p.
Mean	31.4	23.1	95	76.9	8.2	8.2	------	
Total	------	------	------	------	------	------	234.2	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.6	20	97	65	7	8	59.9	┬° ●² p.
2	30.5	21.2	98	61	10	8	33.8	●° a. p.
3	28.6	20.1	97	77	10	9	1.8	d p.
4	28	20	98	77	10	10	18.3	●² a.
5	28	18.8	98	78	10	9	2.3	d p.
6	27.5	20.8	98	70	10	8	------	d a. p.
7	28	21	97	69	8	8	------	♌ ≡ a. p° p.
8	30	21	98	70	7	10	19.8	●² p.
9	29.6	20	98	70	10	9	26.7	♌ ≡ a. ◪ ●² p.
10	28.1	20.4	98	69	7	8	------	≡ a.
11	29.5	20	97	70	10	8	16.8	♌ ≡ ●² a.
12	28.2	21.2	98	69	3	7	------	♌ ≡ a.
13	29.8	21.8	97	64	8	8	7.6	♌ ≡ a. ●° p.
14	30.6	20.1	97	71	10	9	3.6	●° a.
15	27.2	21.6	97	72	10	8	4.6	♌ d a.
16	26.6	21.6	98	75	10	8	5.6	d a. ●° a. p.
17	28.4	21.1	97	74	10	9	50.1	●² p.
18	28	21.6	98	69	8	9	62.2	◪² ●² p.
19	30	21.8	98	68	7	8	------	
20	30.1	21.8	98	65	7	6	------	≡ d a.
21	30	20	98	73	8	10	51.9	♌ ≡ a. ●² ┬° p.
22	28.5	20.2	98	72	10	9	41.7	● a. p. ┬° p.
23	28.8	20.8	97	71	7	8	30.7	┬° a. ●° p.
24	30.2	21.6	98	64	5	8	------	┬° p.
25	30.6	21.8	97	65	7	10	22.4	●² p.
26	28	21.8	98	74	7	9	------	♌ ≡ a.
27	30.1	21.5	98	69	8	9	62	♌ ≡ a. ●² p.
28	28.5	20.1	98	77	10	10	84	●² a. p.
29	28.2	20.2	98	76	7	10	59.9	●² a. p,
30	28.2	20	98	77	10	10	7.6	●° a. p.
Mean	29	20.8	97.7	70.7	8.4	8.7	------	
Total	------	------	------	------	------	------	673.7	

STA. CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.7	22.6	98	65	10	9	2.8	♌²a. ◟°○°┬°p.
2	32.3	22.9	97	85	9	9	3.1	≡a. ◟ ○° ●° ┬ p.
3	33	24.1	98	82	9	10	.1	●° a. d ◟ ┬° p.
4	33	23.3	94	83	7	10	2.1	♌ a. ●° ┬° a. p.
5	30.6	23.1	93	82	10	10	3.8	● d a. p. ┬ p.
6	30.6	22.7	99	72	10	9	13.9	● d a. p.
7	33.2	22.6	94	72	7	9	------	● d p.
8	33	23.3	97	86	10	8	4.6	♌○°a. d ● ┬°p.
9	------	22.5	99	95	10	10	26	♌ d a. ●² ◪² p.
10	33.6	22.3	97	80	9	9	1.8	●a. p. ○° ◟ ┬°p.
11	30.3	22	97	72	8	9	------	♌ d a. ⊽ ◟ p.
12	31.2	23.1	93	69	9	8	3.6	d a. p. ∪ ⊽ p.
13	32	22.2	98	75	9	9	3.6	● a. d a. p. ◟ p.
14	33	23.1	97	82	9	9	12.9	● ◠² a. d ∪ ⊽ p.
15	29.1	22.6	98	87	10	9	14.7	≡ a. d ● p.
16	29.2	21.2	97	89	9	9	30.4	● ◠² a. d ◟ p.
17	31	21.7	98	91	9	9	33.8	●² ⊽ ∪ p.
18	31.6	22.6	99	70	8	8	6.4	≡ a. ●° ◪ p.
19	33.2	22.7	98	72	10	8	11.4	● ○ a.
20	31.4	22.1	98	78	9	8	22.6	● ◠ a. ◪ p p.
21	31.5	21.2	99	97	10	10	66.8	●² ◪ a. p.
22	30.1	22.4	98	92?	10	9	10.4	●° a. ● ┬ p.
23	30.9	21.4	99	75	8	9	6.6	≡ a. d ● ◟ p.
24	33.4	23	98	78	10	9	------	◪ ● p.
25	31.6	22.6	97	75	9	8	2.5	♌ a. ◟ ⊽ p.
26	33	23.4	96	68	9	6	.3	●° a. d ◟ p.
27	32.3	23.7	95	81	8	9	7.4	● a. d ◟ ┬° p.
28	32	23.1	98	94	10	10	4.9	d ○ a. ●° ◟ ┬ p.
29	31.6	23	96	93	9	10	16.5	♌ a. ● ┬ p.
30	31.4	23	98	75	9	8	1	≡ a. ●° p.
Mean	31.8	22.6	97.1	80.5	9.1	8.9	------	
Total	------	------	------	------	------	------	314	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31	22.7	97	78	10	9	7.6	⊕ ◪ ● p.
2	30.4	22.4	91	78	9	9	21.8	p° p.
3	29.2	22.2	96	77	10	10	5.9	◠ a. ● p.
4	26.6	22.6	95	97	10	10	43.5	● a. p. ┬ p.
5	28.1	21.5	96	86	10	10	3.8	d a. p.
6	28.4	22.7	92	91	10	9	24.9	●° a. ● p.
7	30.7	21.7	96	77	5	9	.5	≡° a. d° p
8	32.9	22.3	96	66	9	8	4.8	≡° a. ┬² ● p.
9	31.8	22.3	91	81	10	10	2.3	≡ ●° ◟ p.
10	29.8	21.6	97	89	9	9	------	d° a. ∪ ◟ p.
11	31.3	22.2	94	71	9	9	------	♌² a. ◟ p.
12	32.3	22.3	88	70	9	8	------	◟ p.
13	30.5	22.2	93	93	7	9	18.2	d² a. ● ┬ ◠ p.
14	26.4	21.9	97	85	10	9	18	● a. d° ∪ p.
15	28.1	21.7	97	78	10	9	4.3	●° a. d a. p. ∪ p.
16	29.5	21.6	96	92	9	9	12.2	d² a. ● ┬ p.
17	31.9	21.3	97	69	9	9	.5	d ┬ ◟ p.
18	31.9	21.9	93	61	8	6	53.8	♌° a ●² ◪ p.
19	30.9	21.6	96	69	10	8	43.2	d° a. ●² ◪ p.
20	30.6	21.2	98	74	9	8	------	⊽ ◠ d² a. ○ ◟ p.
21	31.2	21.4	88	85	8	10	11.7	┬ a. p. ●° p.
22	30.4	21.6	95	72	9	8	7.6	d a. ┬ ● ◟ p.
23	30.3	20.8	97	80	5	7	------	≡° ◟ a. ◪ p.
24	28.2	22.9	89	79	9	9	46.7	●² p.
25	31.2	21.4	96	83	8	8	2.3	┬ d° ◟ p.
26	31.3	21.4	96	93	10	9	11.7	● ◪ p.
27	29.9	22	97	81	7	9	1.4	
28	29.2	22.2	97	97	9	10	20.9	d a. ●° a. p.
29	28.8	22.1	97	97	9	10	29.7	d² a. ┬ a. p. ●² p.
30	29.9	22.4	95	76	8	7	5.3	◠° d° a.
Mean	30.1	21.9	94.8	80.8	8.8	88	------	
Total	------	------	------	------	------	------	402.6	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	23.3	86	80	10	10	56.1	● a. ◪² ●² p.
2	28	22.8	96	93	10	10	69.2	● a. ●² ◪ p.
3	30.2	22.7	87	84	10	10	51.8	●° a. ● p.
4	29.4	22.9	97	97	10	10	93.5	● a. ●² p.
5	28.7	22.8	92	82	10	10	18.5	d° a. ● p.
6	29.8	23.5	94	93	10	10	21.7	d° a. ● p.
7	30.8	23.1	97	73	10	10	29.1	●° a. ● p.
8	31.5	23.1	89	69	10	6	------	◠ a. ○ ◪ p.
9	31.4	23.8	88	75	10	9	3.3	○° a. ◪ ●° p.
10	31.4	22.5	89	74	10	10	11.3	○°a. p. ◪ °● p.
11	31.3	22.4	97	73	10	10	1.6	┬ d° p.
12	33	22.9	98	72	10	9	------	d ◪ p.
13	31.9	22.5	96	69	8	8	13	○ a. ◪ ° ● p.
14	27.9	22.2	97	81	9	10	.8	d a. p. ∪ p.
15	31.3	21.9	92	70	10	10	------	d a. ┬ p.
16	32	22	97	91	6	10	8.9	● ┬ d° p.
17	30.5	23	91	90	9	10	33.1	●° a. ● ◪ p.
18	30.7	22.5	97	78	10	10	1	◪ d p.
19	30	22.4	96	84	10	10	3.3	●° ◟ p.
20	30.5	22.6	97	92	5	10	6.3	d a. p. ● ◟ p.
21	31.8	21.6	88	71	9	10	2	◪ ●° p.
22	29.3	22.9	91	80	10	10	6.9	d° a. ● ◪ p.
23	31.5	21.5	96	68	9	7	------	┬ d ◠ ◟ p.
24	29.8	21.3	96	87	10	10	46.2	● ┬ p.
25	29.7	21.3	93	74	10	7	10.4	d ┬ a. ◟ ● p.
26	31.7	21.9	96	75	10	10	26.4	◪ ● p.
27	29.5	22.5	96	92	10	10	78.5	● a. ◪ ●² p.
28	27.2	22.7	94	93	10	10	116.6	● a. ●² p.
29	30	23.1	91	90	10	10	53.5	●° a. ●² p.
30	28.1	23.1	95	94	10	10	70.3	● a. ●² p.
Mean	30.3	22.6	93.6	81.5	9.5	9.5	------	
Total	------	------	------	------	------	------	833.3	

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.3	23.7	97	64	9	8	0.8	☊ a. ● p.
2	31.9	23.6	97	55	8	10	5.6	☊ d a. ● p.
3	32.8	23.5	97	68	9	9	1	☊ a.
4	30.8	24.2	97	90	10	10	34.3	d a. ● p.
5	30.6	23.4	98	90	10	10	12.4	d a. ● p.
6	32.4	22.8	97	79	10	10	22.8	d ● a. p.
7	33.3	23.3	97	63	10	9	4.3	d° a. ● p.
8	33.2	23.6	97	63	10	5	2.5	☊ a.
9	33.3	23.4	98	56	10	8	70.6	☰ a. ● a. p.
10	34	22.5	97	61	10	3	------	☊ ☰ a.
11	32.1	23.4	96	68	9	8	20.6	☊ d a. ● p.
12	33.4	22.9	97	72	8	4	------	☊ ☰ a.
13	34.4	22.5	96	65	9	9	------	☊ a. ⊤ ☋ ☿ p.
14	30.4	23	96	94	9	10	5.4	☊ a. d ● p.
15	31	23.1	97	70	9	9	------	☊ a.
16	32	22.5	96	67	10	9	9.1	☊ a. d° a. p. ● p.
17	31	23	96	80	10	8	1.3	☊ a. ● p.
18	33.7	24	97	65	10	7	14	☊ a. ● p.
19	32.2	23.3	97	65	10	9	.5	☊ ☰ a. d° p.
20	32.4	22.9	96	65	8	9	------	☊ a.
21	33	22.8	96	73	10	10	15.2	☊ a. ● p.
22	32.8	23.3	97	73	9	10	29.4	☊ ● a. ⊤ ☾ ● p.
23	34.2	22.6	96	56	10	9	4.3	☊ a. ● ⊤ p.
24	30.6	22.6	94	77	5	8	30.5	☊ a. ● p.
25	33.1	22.4	97	62	7	7	------	☊ a.
26	33.8	23.6	97	61	10	7	------	☊ a. ☾ p.
27	31.6	23.4	97	79	10	10	6.1	☾ ☊ ☰ a. ● p.
28	31.6	23.6	96	83	9	10	16.5	● a. p.
29	31	23.4	98	93	10	10	51.6	d ● a. p.
30	30.6	23.7	97	82	10	10	2.5	d a. ● a. p.
Mean	32.3	23.2	96.7	71.3	9.3	8.5	------	
Total	------	------	------	------	------	------	361.3	

SAN FERNANDO, UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5	24.7	92	73	5	6	0.5	d² p.
2	29.4	23.2	82	90	3	10	4.5	● p.
3	31.4	24	82	71	10	7	------	
4	30.6	23.8	93	91	10	10	3	● p.
5	28.6	23.5	95	93	10	10	57.2	●° a. p ● p.
6	29.4	23.6	92	90	10	10	103.9	●² a. p.
7	29.5	23	95	80	3	6	4.1	●° p.
8	32	23.8	89	71	4	3	21.6	⊤° ●² p.
9	31.5	22.9	94	69	2	6	6.6	● p.
10	30.9	21.5	95	74	9	2	------	
11	30.6	24.4	97	83	5	10	1.8	●° p.
12	32.4	23	93	75	2	4	------	☾° p.
13	31.7	23.2	97	68	5	3	------	d° ◠° ☾° p.
14	30.7	23.4	98	81	2	10	------	d° p.
15	31.4	22.4	96	70	1	5	------	⊤° ◠° d° p.
16	30.8	23	96	90	1	10	2.5	d° ⊤° ●° p.
17	31.4	22.7	93	70	6	9	24.4	☾² ●² p.
18	31.4	22.8	96	92	10	8	1.8	●° p.
19	30.4	23	95	77	10	8	4.1	●° p.
20	31	22	91	71	3	2	------	
21	31.5	23	97	73	1	6	------	
22	31	24.2	92	72	9	9	1.8	d° a. ☾² ●° p.
23	31.7	22.8	95	75	3	6	1	●° p.
24	28.2	23	82	84	10	10	66	●² ☾° ☾² p.
25	31.9	21.9	85	74	5	6	16.8	☾² ●² p.
26	31	23.4	97	74	5	3	1.5	●° p.
27	31.3	23.9	88	81	4	10	4.6	● p.
28	29.4	23.5	95	97	10	10	55.1	●² p.
29	30.2	23.4	89	93	10	10	4.4	●² d² p.
30	30.9	25	93	78	5	10	.5	⊤² ●° p.
Mean	30.8	23.3	92.5	79.3	5.8	7.3	------	
Total	------	------	------	------	------	------	387.7	

ECHAGUE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	39.7	22.2	97	47	7	8	------	☾° p.
2	37.7	23	95	48	9	8	------	☊° a. ◯² ☾° p.
3	40.8	22.9	96	46	8	9	------	☊° ◯° a. ☾° p.
4	35.6	24.1	95	49	10	10	1	⊕°a. ◯°☾°d²p.
5	34.2	22.7	99	63	10	10	.5	☰² a. d² p.
6	34.8	23.5	98	53	10	10	.3	d° a. p.
7	35.4	22.7	97	61	4	9	------	⊕° a. d° ☾° p.
8	34.2	23.3	97	61	10	9	------	⊕° ◯° a. ☾° p.
9	33.5	22	99	65	8	9	.3	◯° a. d° ☾° p.
10	32.3	23.4	97	70	10	7	------	◯° a. p. ☾° p.
11	33.4	22.7	97	69	9	10	------	◯° a. d ◡° ⊤° ☾° p.
12	31.6	22.8	98	66	7	9	------	d° ⊕° a. ☾° p.
13	34	21.6	98	55	7	10	1.8	◯° a. d² ⊤ ◡² p.
14	27	23	99	90	10	10	4.4	d² a. ◡° p.
15	32.5	22.5	98	63	4	7	------	d²a. ◯°a.p. ◡◠° ☾°
16	28.8	21.9	97	71	10	10	2.8	d² ⊤° ☾° ◡° p.
17	31.6	21.8	98	61	10	9	.8	d²a.p. ◯° ☿² ☾° p
18	34.4	21.8	97	53	9	10	3.3	◯° ☾° d² p.
19	30.6	22.4	98	66	10	10	2.6	◯° a. d² a.p. ☾°
20	33.1	22.2	100	56	7	7	------	☰² a. d° ◠² p.
21	34.9	21.9	97	68	4	9	18	☊² a. d° p.
22	28.4	22.5	99	79	10	10	2.3	● a. d ☾° p.
23	34.3	21.7	98	54	5	4	.3	☾° d° p.
24	26.3	22.2	98	98	10	10	41.9	d² a. ☾ ●° ☾° p.
25	33.8	21.2	98	50	10	8	.5	◯° a. ⊤° d° ☾° p.
26	34	23.4	99	59	10	7	.8	d² ⊕° a. d° ☾° p.
27	33.4	22.7	99	58	10	6	2.8	d² ☾° p.
28	34.3	23.1	98	60	7	10	.5	◯° a. ⊤° d² ☾° p.
29	31.7	23.7	94	65	10	9	------	d° a. ◯° a.p. ☾° p.
30	33.8	23.4	97	57	9	9	------	
Mean	33.3	22.6	97.6	62	8.5	8.8	------	
Total	------	------	------	------	------	------	84.9	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.7	24.5	91	70	7	8	6.6	⊤°a. ◠°a.p. ●°p.
2	30.7	26	80	79	9	10	10.4	●° a. p. ⊤° p.
3	31.4	26	80	67	9	7	------	d° p.
4	30.7	26	84	69	10	8	7.6	p p.
5	27.7	25.5	86	88	10	10	135.7	● a. ●² p.
6	26.8	24.5?	92	88	10	10	103.4	●² a. ● p.
7	28.9	23.5	91	86	10	10	32.5	d ◠° a. ● a. p.
8	29.8	24	89	74	9	7	26.2	☾° ● p.
9	29.9	24	88	77	8	7	11.2	d ⊤° ● p.
10	29.7	24.5	88	81	10	8	------	☾ ◡° p.
11	29.4	24.8	88	74	10	9	------	d a. p. ◠° ☾ p.
12	30.2	24.2	87	73	6	7	------	☊² a. ☾° p.
13	30.7	26	90	78	7	9	------	☊² a. ⊤° ☾ p.
14	29.1	25.2	88	78	4	10	------	☊² a. d° ☿° p.
15	30.4	24.8	88	77	4	7	7.1	☊² a. ☾° p ◠°p.
16	29.7	24.5	88	78	4	9	23.6	☊² a. ● ☾° p.
17	29.9	25	89	78	9	8	48.8	d ●² ☾ p.
18	29.6	24.5	92	75	9	7	7.4	● ☾° p.
19	29.4	24.2	87	82	9	9	8.2	● ☾° p.
20	30.4	23.6	90	75	2	3	------	☿° p.
21	31.1	24.6	87	74	4	4	------	☊ a. ⊤° p.
22	29.1	26	88	84	10	10	11.4	● ◠° ☾° p.
23	30.6	24.4	89	76	7	8	13	● ☾° p.
24	27	23.8	88	87	10	10	28.9	p a. ☾° ● p.
25	30.3	23.6	87	78	8	7	2	☾ p p.
26	30.4	25.5	89	81	9	7	------	d ☾² p.
27	28.5	25	88	85	8	10	13.5	● p.
28	29.6	24	91	80	9	10	31.7	● p.
29	29.7	25.1	86	77	10	10	8.1	● a.
30	31.5	25	85	69	9	8	------	☊ a. ⊤° d p.
Mean	29.8	24.7	87.8	77.9	8	8.2	------	
Total	------	------	------	------	------	------	537.3	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	23.8	94	76	10	9	------	
2	30.8	26	86	76	9	10	3.5	d° ● p.
3	30.5	25.1	91	77	9	10	------	
4	32.1	24.5	89	79	10	10	91.4	d° ● p.
5	24.5	23.2	97	97	10	10	312.4	●² a. p.
6	24.6	22.9	96	97	10	10	122.7	●² a. p.
7	30.3	23.1	97	91	10	10	17.5	d° ● p.
8	32.1	23.3	97	69	10	7	1.5	◠ ●° p.
9	32.3	23.2	97	71	8	6	30.5	● ◪ p.
10	31.1	23	98	76	10	7	2	d° ◟ p.
11	30.1	24.5	97	76	10	10	1.3	d° a. p. ◠² ◟ p.
12	32.4	23.2	97	71	7	7	------	⊤ ◠² p.
13	31.2	24.2	96	75	10	8	------	
14	32.8	23.5	97	77	1	10	------	Ω² a. d° p.
15	31.8	23.4	97	72	1	8	.5	Ω² a. ◠ ⊤ d p.
16	32.2	23.9	98	74	0	8	1.3	Ω² a. ⊤ d ◠² p.
17	32.3	24	96	69	3	9	5.6	Ω² a. ⊤ ● p.
18	31.8	24.1	97	70	10	7	17.8	Ω² a. ◪ ● p.
19	31.7	23.4	98	67	8	8	18.3	Ω² a. ⊤ d° ● p.
20	31.9	22.9	98	74	0	6	------	Ω² a.
21	35.2	24.2	98	51	0	2	------	Ω² a.
22	33	24.3	92	79	2	10	.5	d° p.
23	30.3	23.9	97	74	5	8	29.2	Ω² a. ● p.
24	28.5	23.2	97	84	10	10	28.1	d a. p. ● ◞° p.
25	30.9	23.2	90	69	10	10	------	
26	32.3	23.9	89	75	7	10	1	Ω a. d° p.
27	31.4	23.6	97	91	10	10	35	d° a. ⊤ ● p.
28	28.6	22.9	97	97	10	10	79.5	d a. ● a. p.
29	30	23.6	97	77	10	10	.5	● d a.
30	31.7	23.8	97	70	4	10	1.3	Ω a. d p.
Mean	31	23.7	95.5	76.7	7.1	8.7	------	
Total	------	------	------	------	------	------	801.4	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.9	26.3	88	82	8	8	19.6	d² a. ◞° ●² ⊤ ◟²
2	29.9	24.1	89	83	10	8	.3	d° p.
3	30.5	27.3	85	79	10	9	27.2	◌° d° ◪ ◞° ● p.
4	28.7	24.2	87	86	10	10	13.9	● a. p. ◞° p.
5	29.4	25.3	90	90	10	10	58.8	●² ◞° p.
6	25.4	23.8	92	96	10	10	111.7	● a. ●² p.
7	28.6	24.2	87	86	8	10	------	◠° a.
8	28.9	25.8	87	84	10	10	11.6	● ◪² p.
9	30.4	24.6	91	83	10	10	------	◟ p.
10	29.3	24.4	91	81	10	10	3	d° a. ◟ p.
11	29.4	24.8	90	80	10	8	10.7	● ◠ a. ◟ p.
12	29.1	24.7	91	84	10	10	4.7	● a. p. d° p.
13	31.5	25.7	86	74	4	4	------	v a. ◠² Ω p.
14	32	24.2	88	78	1	4	25.4	v a.
15	31.2	24.6	90	75	4	5	------	●² v a.
16	31.4	26.1	83	76	3	4	12.4	◠ d° a. ⊽ ● p.
17	31.4	24.8	89	83	4	8	1.5	◠ a. p. ◟° ●° p.
18	31.9	24.4	92	81	1	8	21.1	● ◠² p.
19	30.9	24.3	93	75	8	2	1.7	◠ a. d ◠² p.
20	30.8	24.9	83	72	1	4	.2	v a. d Ω p.
21	31.2	24.8	84	72	1	4	------	v a.
22	31	25.3	83	73	8	4	2.5	d° ◠ a. ◌² Ω² p.
23	31.1	24	92	75	3	4	9.9	● a. d° p.
24	30.8	24.5	88	74	10	4	25.6	● a. p. ◠² p.
25	31.3	24.8	84	71	3	6	5.6	● p.
26	30.7	24.8	90	80	8	10	49.1	◠ a. p. ●² ◟ p.
27	29.8	24.3	89	80	7	10	29.7	◠ ●° a. ● p.
28	27.4	25	89	90	10	10	85.1	◞° a. ● a. p.
29	28.5	24.4	91	84	10	10	27.7	● ◪ a. ●° p.
30	31.2	26.6	87	80	7	8	------	◌² Ω² d ◪ ◟° p.
Mean	30.1	24.9	88.3	80.2	7	7.4	------	
Total	------	------	------	------	------	------	559	

SEISMOLOGICAL BULLETIN FOR SEPTEMBER, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

1, $8^h\ 46^m\ 57^s$.* **Santo Domingo** (Batanes Islands). Oscillatory earthquake. Direction NE–SW, intensity III, duration 5 seconds. Its origin lay underneath the sea, probably southeast of Formosa. The disturbance was of tectonic character and was registered by the seismographs all over the world.

At $22^h\ 22^m\ 54^s$ of the same day, another earthquake occurred in the region of Formosa, but farther north than the preceding, probably to the east of northern Formosa. Though likewise of tectonic character, it was not perceptible in the Batanes group. We subjoin the times (reduced to that of the one hundred and twentieth meridian east of Greenwich) at which the various phases of these two seismic disturbances were recorded at the different observatories of the Far East and at some of those in Europe.

Observatory.	First earthquake.									
	P.			S.			L.			F.
	h.	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*
Manila	8	46	57				8	48	36	10.5
Zikawei	8	47	00	8	48	40	8	50	36	10
Tsingtau	8	47	04	8	50	00	8	53	07	10.3
Osaka										
Batavia	8	51	17				8	58	32	9.8
Vienna	8	57	15	9	7	35	9	27	00	10.3
Hamburg	8	57	30	9	7	45	9	27	00	10.8
	Second earthquake.									
Zikawei	22	22	54	22	24	05	22	25	08	23.8
Tsingtau	22	23	05	22	25	45	22	26	58	23.4
Manila	22	23	35	22	25	50	22	27	10	23.4
Osaka										
Batavia	22	28	01							23.2
Vienna	22	33	27	22	43	42	23	03	00	24.8
Hamburg	22	33	00	22	43	54	23	04	00	24.5

4, $13^h\ 35^m$. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity IV, and long duration.

6, $3^h\ 22^m$. **Leyte Island.** Oscillatory earthquake of intensity IV. It was well perceptible throughout the northern part of the island, within an area of about 90 kilometers in diameter. It would appear that the epicenter must be located between the northern coast and Biliran Island.

6, $10^h\ 20^m$. **Borongan** (E of Samar). Earthquake of intensity III; duration 4 seconds. Neither this disturbance nor that of Leyte was registered by the seismographs of Manila, nor of any other observatory in the Far East.

11, $22^h\ 5^m$. **Talacogon** (Agusan Valley). Earthquake of intensity III.

14, $22^h\ 0^m\ 26^s$.* **Iloilo** (SE of Panay). Earthquake of intensity III, felt throughout nearly the whole Province of Iloilo. Its origin must probably be sought toward the center of the province, about 30 kilometers northwest of Iloilo, where a principal epicenter of Panay Island is situated.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

17, 7h 10m 2s. **Northern Luzon.** Earthquake of intensity V. It was felt in the entire northern part of Luzon, which comprises Ilocos Norte Province and the northern part of Cagayan and the Mountain Province. It was registered not only by the seismographs of the Far East, but likewise by those of Europe. We give the times at which the phases were registered at these observatories.

Observatory.	P.	S.	L.	F.
	h. m. s.	h. m. s.	h. m. s.	h.
Manila	7 10 20		7 11 24	8.8
Zikawei	7 11 20	7 14 20	7 16 18	8.3
Tsingtau	7 10 40	7 13 46	7 15 30	8.3
Osaka				
Batavia	7 14 39			8.1
Veinna	7 21 07	7 31 30	7 52 --	8.5
Hamburg	7 21 22	7 31 57	7 55 --	8.9

The epicenter would seem to have been at a distance of some 600 kilometers from Manila, 1,500 kilometers from Zikawei, and 2,100 kilometers from Tsingtau, and hence in about the latitude of the Babuyanes Islands, not far from the northern coasts of Luzon. Still, the discordance between the times registered at the first three observatories can hardly be explained under the supposition of a single epicenter and only the one earthquake felt in northern Luzon. We have examined our seismograms very carefully, but could not find anything abnormal: they appear to correspond perfectly to the type of an earthquake proceeding from a near-by center, that is to say, one at a distance of less than 1,000 kilometers. The only circumstance which might be considered as anomalous is the long duration of the agitation of the instruments, lasting more than an hour.

20, 18h 30m. **Talacogon** (Agusan Valley). Two or three shocks of intensity II.

25, 15h 45m. **Talacogon** (Agusan Valley). Earthquake of intensity III. On the 30th there occurred likewise a few shocks of intensity II.

30, 3h 14m. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction W–E, intensity III, duration 3 seconds.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight =0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2 a.).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	h. m. s.	h. m. s.	h. m. s.	mm.	s.	h. m.	
143	1	II_v	V.	8 46 57	----------	8 48 36	8 49 30	1.56	2.4	10 04	Vertical component 0.08 mm.
			H. NNW	8 46 57	----------	8 48 39	8 51 37	4.20	10.8	10 30	Felt in Batanes Islands.
			H. WSW	8 46 57	----------	8 48 38	8 50 08	4	8.1	10 12	
144	1	II_r	V.	22 23 35	----------	22 27 10	22 31 03	.04	13.6	23 26	
			H. NNW	22 23 35	----------	22 27 10	22 30 01	.26	11.1	23 26	
			H. WSW	22 23 35	----------	22 27 09	22 31 02	.15	13.8	23 13	
145	3	I_d	V.	13 18 58	----------	13 19 14	13 19 20	.06	2.4	13 22	V. C. 0.01 mm.
146	4	I_d	V.	23 28 15	----------	23 28 32	23 28 34	.09	2.4	23 31	V. C. 0.01 mm.
147	5	I_d	V.	17 57 11	----------	17 57 25	17 57 51	.12	2.4	18 01	V. C. 0.02 mm.
148	7	I	V.	12 49 13	----------	----------	----------	----------	----------	13 03	
			H. NNW	12 49 13	----------	----------	----------	----------	----------	13 01	
			H. WSW	12 49 13	----------	----------	----------	----------	----------	13 06	
149	7	II_r	V.	15 18 15	15 23 43?	15 29 40?	15 33 49	.02	12	16 22	
			H. NNW	15 18 15	15 23 56?	15 29 33?	15 33 23	.05	13.2	16 25	
			H. WSW	15 18 15	15 23 49?	15 29 36?	15 33 39	.10	15.6	16 32	
150	9	I_r	V.	9 23 47	----------	----------	----------	----------	----------	10 30	
			H. NNW	9 23 48	----------	----------	----------	----------	----------	10 25	
			H. WSW	9 23 48	----------	----------	----------	----------	----------	10 27	
151	10	I	V.	20 35 16	----------	----------	----------	----------	----------	21 05	
			H. NNW	20 35 16	----------	----------	----------	----------	----------	21 00	
			H. WSW	20 35 16	----------	----------	----------	----------	----------	21 05	
152	14	I_r	V.	22 00 26	----------	22 04 41	22 05 22	.02	4.8	22 23	V. C. 0.01 mm.
			H. NNW	22 00 26	----------	22 04 23	22 05 23	.03	5	22 21	
			H. WSW	22 00 26	----------	22 04 34	22 06 06	.11	11.4	22 26	
153	17	II_v	V.	7 10 02	----------	7 11 24	7 15 28	2.93	9.9	8 41	V. C. 0.09 mm. Earthquake, V north
			H. NNW	7 10 02	----------	7 11 17	7 17 26	3.51	9	8 27	of Luzon.
			H. WSW	7 10 02	----------	7 11 17	7 17 26	3.51	9	8 35	
154	24	I_d	V.	7 51 25	----------	7 51 38	7 51 44	.03	2.4	7 55	V. C. 0.01 mm.

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=11.8 seconds; WSW–ENE pendulum, T=8.8 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only four to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

1, $8^h\ 46^m\ 57^s$.* **Santo Domingo** (Islas Batanes). Temblor oscilatorio. Dirección NE–SW, intensidad III, duración 5 segundos. El origen de este temblor de tierra se hallaba en el océano, probablemente al SE de Formosa; fué de carácter tectónico y lo registraron los seismógrafos de todo el mundo.

El mismo día á $22^h\ 22^m\ 54^s$ ocurrió en la misma región de Formosa, pero más al N, tal vez hacia el E del norte de la Isla, otro terremoto del mismo carácter, el cual sin embargo no fué perceptible en Batanes. Á continuación copiamos las horas (reducidas al meridiano 120° E de Gr.) de las diferentes fases de las perturbaciones seísmicas registradas en los Observatorios del Extremo Oriente y en algunas de Europa.

Observatorio.	Primer terremoto. P.			S.			L.			F.
	h.	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*
Manila	8	46	57				8	48	36	10.5
Zikawei	8	47	00	8	48	40	8	50	36	10
Tsingtau	8	47	04	8	50	00	8	53	07	10.3
Osaka										
Batavia	8	51	17				8	58	32	9.8
Viena	8	57	15	9	7	35	9	27	00	10.3
Hamburgo	8	57	30	9	7	45	9	27	00	10.8
	Segundo terremoto.									
Zikawei	22	22	54	22	24	05	22	25	08	23.8
Tsingtau	22	23	05	22	25	45	22	26	58	23.4
Manila	22	23	35	22	25	50	22	27	10	23.4
Osaka										
Batavia	22	28	01							23.2
Viena	22	33	27	22	43	42	23	03	00	24.8
Hamburgo	22	33	00	22	43	54	23	04	00	24.5

4, $13^h\ 35^m$. **Talacogon** (Valle del Agusan, Mindanao). Temblor de tierra de intensidad IV, y de larga duración.

6, $3^h\ 22^m$. **Isla de Leyte.** Temblor oscilatorio de intensidad IV. Fué bien perceptible en toda la parte septentrional de la Isla, en un área de unos 90 kilómetros de diámetro. El epicentro parece que debe colocarse entre la costa norte y la Isla de Biliran.

6, $10^h\ 20^m$. **Borongan** (E de Sámar). Temblor de tierra de intensidad III; duración 4 segundos. Ninguno de estos temblores de Sámar y Leyte fué registrado por los seismógrafos de Manila, ni de otro Observatorio del Extremo Oriente.

11, $22^h\ 5^m$. **Talacogon** (Valle del Agusan). Temblor de tierra de intensidad III.

14, $22^h\ 0^m\ 26^s$.* **Iloílo** (SE de Panay). Temblor de tierra de intensidad III, sentido en casi toda la Provincia de Iloílo. El origin estará probablemente hacia el centro de la provincia á unos 30 kilómetros al NW de Iloílo, donde existe un epicentro principal de la Isla de Panay.

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

17, 7^h 10^m 2^s.* **N de Luzón.** Temblor de tierra de intensidad V. Fué sentido en toda la parte septentrional de Luzón que comprende la Provincia de Ilocos Norte y la parte norte de las de Cagayán y Montañosa. Registráronlo no solo los seismógrafos del Extremo Oriente sino también los de Europa. Á continuación van las horas de las perturbaciones registradas en los Observatorios arriba citados.

Observatorio.	P.			S.			L.			F
	h.	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*	*m.*	*s.*	*h.*
Manila	7	10	20				7	11	24	8.8
Zikawei	7	11	20	7	14	20	7	16	18	8.3
Tsingtau	7	10	40	7	13	46	7	15	30	8.3
Osaka										
Batavia	7	14	39							8.1
Viena	7	21	07	7	31	30	7	52		8.5
Hamburgo	7	21	22	7	31	57	7	55		8.9

El epicentro se hallaba al parecer á unos 600 kilómetros de distancia de Manila, á 1,500 de Zikawei y 2,100 de Tsingtau, debiendo por consiguiente colocarse hacia el paralelo de las Islas Babuyanes, á poca distancia de las costas septentrionales de Luzón. Con todo, la discordancia que se nota en las horas de los tres primeros Observatorios difícilmente puede explicarse con un solo epicentro y el único terremoto sentido en la parte norte de Luzón. Hemos examinado con detención nuestros seismogramas y nada hemos podido descubrir de anormal, parecen corresponder perfectamente al tipo de un epicentro vecino, situado á menos de 1,000 kilómetros: lo único tal vez extraordinario es la duración de más de una hora.

20, 18^h 30^m. **Talacogon** (Valle del Agusan). Dos ó tres sacudidas de intensidad II.

25, 15^h 45^m. **Talacogon** (Valle del Agusan). Temblor de tierra de intensidad III. El día 30 se sintieron también algunas sacudidas de intensidad II.

30, 3^h 14^m. **Tacloban** (NE de Leyte). Temblor oscilatorio. Dirección W–E, intensidad III, duración 3 segundos.

BULLETIN FOR OCTOBER, 1910.

METEOROLOGICAL BULLETIN FOR OCTOBER, 1910.

By Rev. JOSÉ CORONAS, S. J.,

Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—As will be seen presently, this month was characterized by the scarcity of depressions and typhoons. Hence, it is not surprising that the monthly means of atmospheric pressure obtained at our stations are notably higher than those for October of the preceding year, which abounded in atmospheric disturbances. At Manila the monthly mean exceeded the normal value by only 0.67 millimeter; but its difference from the monthly mean for October, 1909, was +2.20 millimeters.

The monthly mean temperature was for some stations about identical with that of the corresponding month of last year, while for others it was slightly lower. The extreme values registered at Manila Observatory were 33.5°C and 21.0°C.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR OCTOBER, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from Oct., 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from Oct., 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	758.15	----------	759.52	18	753	31	27.4	— 0.2	----------	----------	22.8	22,26
Surigao	58.48	+ 1.03	60.06	18	51.29	31	26.5	— .8	33	17	22.4	12
Cebu	58.49	----------	59.84	18	52.86	31	26.5	----------	31.6	5,7	22.4	16
Iloilo	58.90	+ 1.22	60.38	18	54.60	31	26.7	— .1	32.5	23,27	22.7	3,13,28
Ormoc	58.61	+ 1.17	60.16	15	50.43	31	25.3	— 1.1	33.1	14	19.8	19
Tacloban	59.05	+ 1.45	60.90	18	48.02	31	26.6	— .6	35	6	21.5	31
Capiz	58.95	----------	60.96	18	54.32	31	26.5	— .5	33.2	8	21.6	18
Calbayog	59	+ 1.27	60.92	18	51.52	31	26	— .7	33.4	5	21.1	19
Legaspi	58.82	+ 1.69	60.67	18	53.78	31	26.5	— .8	33.5	7	20.9	13
Atimonan	59.15	+ 2.13	60.80	18	56.02	31	26.9	— .5	33.9	6	21.5	5
Paracale	59.11	----------	61.07	18	55.67	31	----------	----------	----------	----------	----------	----------
Manila	59.27	+ 2.20	60.80	18	56.13	31	25.9	— 1	33.5	30	21	19
San Isidro	59.04	+ 2.12	60.70	18	56.15	31	26.4	----------	33.5	30	21.3	23
Dagupan	58.90	+ 2.25	60.30	18	56.17	31	27.4	+ .1	35.5	24	22.4	19
Bolinao	58.68	+ 2.26	60.13	18	56.10	31	27	— .1	33.8	25,26	21.6	23
Baguio[2]	636.85	+ 1.90	638.02	18	635.05	3	18.1	----------	24.9	21	14.5	21
Vigan	758.98	+ 2.57	760.49	18	756.56	31	27	— .4	33.3	30	21.9	9
Tuguegarao	59.78	+ 3.10	61.61	18	57.09	3	25.9	— .9	35.5	1	20	21,29
Aparri	60.22	+ 3.16	62.09	18	57.31	3	26	----------	32	23	21.6	14

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Precipitation.—All the stations north of Manila report a total of rainfall considerably below the amount for October, 1909. In Manila, the rain gauges of the Observatory registered a quantity which exceeds the normal for the month by 52.5 millimeters and the total during the same month of the preceding year by 80.4 millimeters. As regards the stations south of Manila, there is no uniformity, some reporting more rain, others less, than for October, 1909.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF OCTOBER, 1910.

Station.	Total.	Departure from October, 1909.	Rainy days.	Departure from October, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from October, 1909.	Rainy days.	Departure from October, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	303.2	+129.7	12	— 9	97	24	Calapan	375.8	+141.9	23	+ 4	60.4	17
Isabela, Basilan	215.6	—148.7	17	0	58.4	29	Virac	333.4	+ 85.5	23	+ 2	109.2	2
Zamboanga	137.6	—161.2	14	— 6	37.3	2	Nueva Caceres	263.4	— 89.9	16	+ 2	63.5	2
Davao	222.5	—240.4	13	0	26.7	20, 26	Batangas	213.3	+ 1.2	17	— 2	41.4	13
Cotabato	152	—132.4	21	+ 5	41.7	6	Atimonan	437.9	+ 70.7	23	+ 3	91.1	10
Dapitan[1]	176				52.1	23	Silang	390.3	+105.4	15	+ 3	99.4	2
Butuan	147.4	+ 9	20	+ 5	19.3	24	Paracale	574.6		23		121.4	11
Dumaguete	209.2		17		61	25	Santa Cruz, La Laguna	240	— 75.2	21	+ 1	52.1	14
Yap, W. Carolines	203.5		21		50.8	28	Antipolo	164.6		19		22.1	16
Tagbilaran	144.6	— 21.9	18	+ 5	27.4	27	Manila	245.4	+ 80.4	22	+ 4	43.6	3
Surigao	216.7	+ 65.7	12	— 1	113.6	31	Iba	175.4		14		69.8	3
Maasin	434.9	+249	11	0	116.1	31	San Isidro	54.9	—357.3	9	— 7	13.4	9
Cebu	384.2		20		102.1	27	Tarlac	73.3	—254.5	10	— 6	33	2
Iloilo	169.5	—173.3	18	— 5	37.8	31	Dagupan	105.1	—223.5	12	0	47.6	8
San Jose Buenavista	234	—250	16	— 2	45	14	Bolinao	116	—390	12	— 1	41.4	10
Cuyo	337.5		18		65.7	11	Baguio	227.9	—858	21	+ 4	58.2	2
Ormoc	284.5	+ 13.8	24	+ 8	98.5	31	San Fernando, Union	78.8	—191	6	— 4	27.9	8
Tacloban	320.7	+154.2	20	+ 6	69.1	31	Echagüe	159.4	— 54.5	19	+ 4	52.3	1
Capiz	391.7	+ 29.2	25	+ 2	45	29	Candon	172.7	—334.5	8	— 2	69.1	2
Borongan	485.4	+171.4	23	0	92.7	31	Vigan	82.4	—340.9	7	— 4	62	8
Calbayog	342.5	+ 87.4	23	+ 2	49.6	31	Tuguegarao	94.8	—266.1	10	— 4	27.2	8
Masbate	214.4	+ 57.3	20	+ 3	60.4	2	Laoag	86.5	—772.4	6	— 5	34.3	8
Legaspi	420.5	— 32.2	21	0	90.2	2	Aparri	285.8		17		99.6	3
Sumay, Guam	319.7	— 24.1	24	— 4	77.5	4	Sto. Domingo, Batanes Is	133.8	—240.7	10	— 9	88.4	4

[1] 28 days of observation only.

DEPRESSIONS AND TYPHOONS.

No depression or typhoon crossed the Archipelago during this month. A typhoon penetrated indeed into Samar at nightfall of the 31st, but it evidently must be credited to November rather than to October.

Nevertheless, thanks to the observations made in the Mariana Islands, the Western Carolines, and the Loochoos, Manila Observatory was enabled to announce one depression and one typhoon, which moved at considerable distances from the Philippines. Their tracks are given on Plate XV.

Depression of September 27 to October 6, 1910.—This depression formed between Guam and Yap, September 27th to 28th, as is indicated with considerable clearness by the observations made at the two places. On October 3 and 4 some signs of its presence to the northeast of Luzon were noticed at Manila, as was stated in the following daily weather notes corresponding to those days:

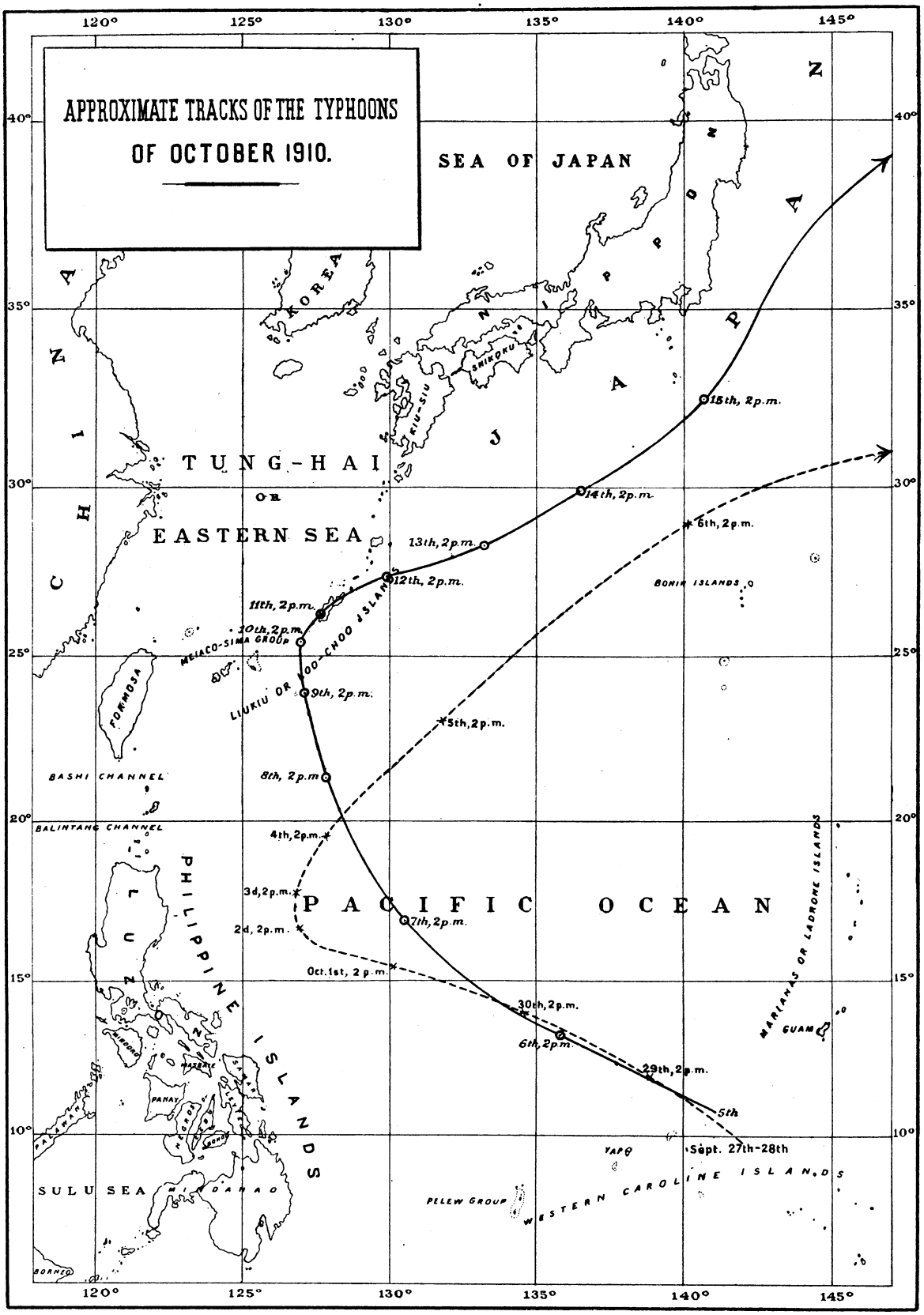
October 3, 12.30 p. m.: There are signs of a depression northeast of Luzon; its actual direction, however, can not yet be ascertained.

October 4, 12.15 p. m.: Pressure is low over the Pacific northeast of Luzon.

The few data on hand make it absolutely impossible to state whether this depression was of any importance or not, and likewise to claim for its track more than probability.

Typhoon of October 5 to 16, 1910.—This typhoon originated likewise between Guam and Yap on October 5, but nearer to the latter station than to the former. In the following table are embodied the observations made at both stations on the 5th and 6th. To judge from the force of the wind observed at Yap on the 6th, it would seem that on the said day the storm had acquired considerable development and intensity.

Plate XV.


APPROXIMATE TRACKS OF THE TYPHOONS
OF OCTOBER 1910.
SEA OF JAPAN
KOREA
KIU-SIU
SHIKOKU
TUNG-HAI
OR
EASTERN SEA
CHINA
JAPAN
15th, 2p.m.
14th, 2p.m.
13th, 2p.m.
12th, 2p.m.
11th, 2p.m.
10th, 2p.m.
9th, 2p.m.
8th, 2p.m.
7th, 2p.m.
6th, 2p.m.
5th, 2p.m.
4th, 2p.m.
3d, 2p.m.
2d, 2p.m.
Oct. 1st, 2 p.m.
30th, 2p.m.
6th, 2p.m.
29th, 2p.m.
5th
Sept. 27th-28th
MEIACO-SIMA GROUP
LIUKIU OR LOO-CHOO ISLANDS
BONIN ISLANDS
FORMOSA
BASHI CHANNEL
BALINTANG CHANNEL
PACIFIC OCEAN
PHILIPPINE ISLANDS
LUZON
MINDORO
PANAY
NEGROS
MINDANAO
SULU SEA
BORNEO
PALAWAN
MARIANAS OR LADRONE ISLANDS
GUAM
YAP
PELEW GROUP
WESTERN CAROLINE ISLANDS
120°
125°
130°
135°
140°
145°
40°
35°
30°
25°
20°
15°
10°

METEOROLOGICAL OBSERVATIONS FOR OCTOBER 5 AND 6, 1910.

Date and hour.	Yap, Western Carolines.						Sumay, Guam, Ladrone Islands.				
	Pressure.	Difference in 24 hours.	Wind. Direction.	Wind. Force.	Rainfall (daily total).	Remarks.	Pressure.	Difference in 24 hours.	Wind. Direction.	Wind. Force.	Rainfall (daily total).
5th:	*mm.*			*0–12.*	*mm.*		*mm.*			*0–12.*	*mm.*
6 a. m	757.90	—1.0	NW	1	-------	Convergence of Ci. toward E.	759.22	—0.2	SE	2	-------
2 p. m	55.69	—1.9	WNW	3	6.8	Solar halo -------	57.00	—0.1	S	3	19.1
6th:											
6 a. m	55.92	—2.0	SW	1	-------	Heavy sea from SSW from 11 a. m. to 2 p. m.; the wind backed clearly from SW to S; maximum velocity 6 Beaufort, 12 to 5 p. m.	58.87	—0.4	SE	2	-------
2 p. m	55.53	—0.2	SSW	3	17.8	------- ------- -------	58.60	+1.6	ESE	3	38.1

On the 8th it was already possible to notice the presence of the storm to the northeast of Luzon and likewise to give its approximate direction. We insert here the dispatch sent to Tokyo, Zikawei, Taihoku, Hongkong, and Phulien.

October 8, 10.20 a. m.: Typhoon northeast of Luzon, moving northwest or north-northwest.

The ordinary weather note of the same day contained the following reference to the storm:

October 8, 11.45 a. m.: A typhoon formed a few days ago north of the Western Carolines appears this morning far off northeast of Luzon, moving apparently to northwest or north-northwest.

The following day this cablegram was sent to the above-mentioned meteorological centers of the Far East:

October 9, 10.55 a. m.: Typhoon south of Naha (Loochoo Islands), recurving northeastward.

The further course of the typhoon was described in the daily weather notes as follows:

October 10, 11.30 a. m.: The typhoon continues recurving slowly northeastward: its center is approaching the central part of the Loochoos Islands.

October 11, 11.45 a. m.: The typhoon continues recurving very slowly, its center being situated this morning over the central part of the Loochoos.

October 12, 11.30 a. m.: The Typhoon continues moving slowly northeastward across the Loochoos Islands.

October 13, 11.50 a. m.: The typhoon continues moving very slowly northeastward, its center being situated this morning near the northern part of the Loochoos.

October 14, 11.30 a. m.: The typhoon is situated east of the Loochoos, moving apparently to east-northeast.

October 15, 11.40 a. m.: The typhoon is situated this morning between the Loochoos and the Bonins, moving eastward.

The track of this typhoon as given on Plate XV, has been traced with the aid of the three daily weather maps issued by Tokyo Observatory. It shows how the typhoon was recurving very slowly, while its center was over the central part of the Loochoos Islands. The barometer of Naha fell to 730 millimeters at 2 p. m. of the 11th.

From Hongkong Observatory we received the following notices relative to this disturbance:

October 8, 11.30 a. m.: Typhoon south of Loochoos Islands, moving north-northwest.

October 9, noon: Typhoon south of Loochoos Islands, moving northeast.

Zikawei Observatory on its part kept the stations on the Chinese coast informed of the progress of the storm from October 6th to 13th. We transcribe only the notices issued during the first 5 days of this period.

October 6, 4.30 p. m.: Typhoon far to the east of Philippine Islands, moving northwest.
October 7, 4 p. m.: Typhoon east of Luzon, moving northwest.
October 8, noon: Typhoon northeast of Luzon, moving northwest.
October 9, 10 a. m.: Typhoon southeast of Meiacosima group, recurving.
October 9, 2.15 p. m.: Typhoon south of Loochoos Islands, moving northeast.
October 9, 4.30 p. m.: Typhoon south of Loochoos Islands, moving north.
October 10, 9.50 a. m.: Typhoon west of Loochoos Islands, moving north.
October 10, 9 p. m.: Typhoon over central Loochoos Islands, moving northeast.

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—Habiéndose distinguido este mes por la escasez de depresiones ó tifones, según diremos luego, no es de extrañar que la media mensual de la presión atmosférica de nuestras estaciones sea notablemente mayor que la de Octubre del año próximo pasado en que tanto abundaron las perturbaciones atmosféricas. La media mensual de Manila supera á la normal en solos 0.67 mm.; pero su diferencia de la media mensual de Octubre 1909 es de +2.20 mm.

La media mensual de la temperatura es para algunas estaciones casi idéntica á la del año pasado y para otras ligeramente inferior. Los valores extremos registrados en el Observatorio de Manila fueron 33.5°C y 21.0°C.

Precipitación acuosa.—Todas las estaciones al norte de Manila dan un total de lluvia notablemente menor que el de Octubre, 1909. En Manila la cantidad de agua recogida en los pluviómetros del Observatorio durante todo el mes supera á la normal en 52.5 mm. y al total del año pasado en 80.4 mm. Por lo que toca á las estaciones al sur de Manila no hallamos en ellas uniformidad, sino que unas dan cantidades mayores y otras menores que la de Octubre 1909.

DEPRESIONES Y TIFONES.

En todo el mes no ha habido ninguna depresión ó tifón que haya atravesado el Archipiélago, excepción hecha únicamente de un tifón que penetró en Sámar al anochecer del 31 y que por lo tanto pertenece más bien al próximo mes de Noviembre.

Sin embargo, el Observatorio de Manila, fundado principalmente en las observaciones de Carolinas y Marianas y de las Islas Liukiu, pudo anunciar una depresión y un tifón en el Pacífico á bastante distancia de Filipinas. Sus trayectorias aproximadas pueden verse en la Lámina XV.

Depresión de 27 de Septiembre á 6 de Octubre, 1910.—Esta depresión se formó del 27 al 28 de Septiembre entre Guam y Yap, según parecen indicarlo con bastante claridad las observaciones hechas en aquellas estaciones. Durante los días 3 y 4 de Octubre se notaron en Manila algunos indicios de la existencia de esta depresión hacia el NE de Luzón, según se dijo en las siguientes notas ordinarias del tiempo correspondientes á aquellos días.

Día 3, 12.30 p. m.: Hay indicios de una depresión al nordeste de Luzón: su dirección actual, sin embargo, no se puede precisar aún.

Día 4, 12.15 p. m.: La presión atmosférica está baja en el Pacífico al NE de Luzón.

Nos es absolutamente imposible precisar con los pocos datos que tenemos si esta depresión fué ó no de alguna importancia. Tampoco podemos dar á su trayectoria más que un valor algo probable.

Tifón de 5 á 16 de Octubre, 1910.—Este tifón se formó el día 5 entre Guam y Yap, pero más cerca de esta estación que de aquélla. En el texto inglés damos en una tabla las observaciones hechas en ambos puntos los días 5 y 6. Á juzgar por la fuerza de los vientos observada en Yap el día 6 parece ser que en dicho día hubo de adquirir este tifón notable desarrollo é intensidad.

El día 8 por la mañana se pudo ya descubrir su existencia al NE de Luzón y aún señalar su dirección aproximada. Hé ahí el telegrama que se envió á Tokio, Zikawei, Taihoku, Hongkong y Phulien:

Día 8, 10.20 a. m.: Tifón al NE de Luzón, moviéndose al NW ó NNW.

Y en la nota ordinaria del tiempo de aquel mismo día se decía lo siguiente:

Un tifón formado hace pocos días al N de las Carolinas Occidentales aparece esta mañana lejos al NE de Luzón moviéndose aparentemente al NW ó NNW.

El día siguiente se remitió este telegrama á los Centros Meteorológicos del Extremo Oriente arriba indicados:

Día 9, 10.55 a. m.: Tifón al Sur de Naha (Islas Liukiu) recurvando al nordeste.

El curso ulterior del tifón fué seguido por el Observatorio en las notas ordinarias del tiempo que copiamos á continuación:

Día 10, 11.30 a. m.: El tifón continúa recurvando lentamente al nordeste: su centro se está acercando á la parte central de las islas Liukiu.

Día 11, 11.45 a. m.: El tifón continúa recurvando muy lentamente, hallándose su centro esta madrugada en la parte central de las islas Liukiu.

Día 12, 11.30 a. m.: El tifón continúa moviéndose lentamente al nordeste á traves de las islas Liukiu.

Día 13, 11.50 a. m.: El tifón continúa moviéndose muy lentamente hacia el nordeste, hallándose su centro esta mañana cerca de la parte norte de las islas Liukiu.

Día 14, 11.30 a. m.: El tifón se halla ahora al Este de las islas Liukiu, moviéndose aparentemente al ENE.

Día 15, 11.40 a. m.: El tifón se halla esta mañana entre las islas Liukiu y Bonin moviéndose hacia el Este.

La trayectoria de este tifón (véase la Lámina XV) la hemos trazado teniendo á la vista los tres mapas del tiempo diarios del Observatorio de Tokio. Por ella verán nuestros lectores cómo en efecto el tifón fué recurvando con mucha lentitud precisamente cuando el vórtice demoraba en la parte central de las islas Liukiu. El barómetro de Naha llegó á bajar hasta 730 mm. á 2 p. m. del día 11.

Del Observatorio de Hongkong recibimos estos dos telegramas referentes á este tifón:

Día 8, 11.30 a. m.: Tifón al S de las Islas Loochoos, moviéndose al NNW.

Día 9, mediodía: Tifón al S de las Islas Loochoos, moviéndose al NE.

El Observatorio de Zikawei por su parte fué siguiendo los movimientos de este tifón en sus avisos enviados á las estaciones de la costa de China desde el 6 hasta el 13. Copiaremos aquí solamente los de los cinco primeros días.

Día 6, 4.30 p. m.: Tifón lejos al E de Filipinas, moviéndose al NW.

Día 7, 4 p. m.: Tifón al E de Luzón moviéndose al NW.

Día 8, mediodía: Tifón al NE de Luzón, moviéndose al NW.

Día 9, 10 a. m.: Tifón al SE de Meiacosima, recurvando.

Día 9, 2.15 p. m.: Tifón al S de Loochoos, moviéndose al NE.

Día 9, 4.30 p. m.: Tifón al S de Loochoos, moviéndose al N.

Día 10, 9.50 a. m.: Tifón al W de Loochoos, moviéndose al N.

Día 10, 9 p. m.: Tifón en Loochoos, moviéndose al NE.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	758.36	27.1	31.9	24.1	28	29.1	28.3	28.6	28.6	28.7	82.5	21.8	3.2	2.3
2	58.30	25.7	31.7	23.7	28.3	29	28.7	28.7	28.5	28.8	91.2	22.3	1	1
3	57.59	24.4	26.4	23.3	28	28	28.5	28.5	28.6	28.7	95.8	21.7	0	.6
4	58.58	25.2	29	22.7	27.2	28	28.2	28.3	28.6	28.7	90	21.4	1.6	1.2
5	59.40	27.1	31.5	23.3	27.8	28.7	28.1	28.3	28.6	28.8	82.4	21.7	3.2	2.4
6	58.86	26.8	31.9	23.3	28	29.1	28.3	28.6	28.6	28.7	83.7	21.7	2.7	2.1
7	58.59	26	31.7	22.3	28.3	29.1	28.7	28.7	28.6	28.7	87.7	21.7	1.7	1.5
8	58.18	26.6	30.7	22.5	28	28.8	28.6	28.6	28.6	28.7	86.1	22.3	2.3	1.9
9	58.53	26.1	31	24.1	28	29.1	28.5	28.7	28.5	28.6	87.6	22	1.5	1.5
10	59.25	25.5	30.6	23.3	28	28.3	28.1	28.6	28.5	28.6	90.1	21.8	1.1	1
11	59.97	24.9	29.7	23.5	27.8	28.2	28.4	28.5	28.5	28.6	91.8	21.3	.7	.6
12	59.92	25.6	31	22.8	27.4	28	28.2	28.3	28.5	28.5	88.2	21.4	1	1.4
13	59.68	25	30.1	21.6	27.6	28.1	28.2	28.3	28.5	28.6	90.3	21.2	1.1	1
14	60.02	24.8	29.8	22.7	27.4	27.7	28.1	28.1	28.4	28.6	91.7	21.3	.7	1
15	60.29	26.2	31.7	22.9	27.1	28.2	27.9	28.1	28.4	28.6	83.5	20.9	2.9	2.1
16	60.06	26.2	31.8	22.4	27.5	28.4	28.1	28.3	28.4	28.7	83.7	21	2.6	2.1
17	60.38	24.9	29.9	23.3	28	28.3	28.3	28.3	28.4	28.7	91.7	21.4	.6	.8
18	60.80	26.2	32	21.9	27.5	28.7	28.3	28.3	28.4	28.7	82	20.5	3.1	2.6
19	60.39	25.7	31.7	21	27.5	28.3	28.2	28.5	28.4	28.7	81.4	19.9	2.7	2.2
20	60.09	25.2	31.4	21.7	27.4	28	28.1	28.4	28.3	28.5	86.5	20.5	1.1	1.4
21	59.76	25.8	31.8	22.7	27.1	28.1	28	28.2	28.4	28.6	88.5	21.7	1.9	1.3
22	59.79	25.3	30.2	22.9	27.3	28	28	28	28.3	28.5	90.8	21.7	1	1
23	59.55	25.9	30.8	23	27.3	28.2	28	28.1	28.3	28.5	85.6	21.2	1.7	1.6
24	59.16	26.5	32.8	21.7	27.3	28.3	28.2	28.3	28.4	28.6	78.2	19.8	3.4	2.6
25	59.98	25.6	32.4	21.6	27.3	28.2	28	28.3	28.3	28.5	85.8	20.7	2	1.9
26	59.98	25.7	31.8	21.5	27.2	28.5	28.1	28.2	28.3	28.6	83.6	20.3	2.9	2.2
27	59.57	25.8	32	21.8	27.3	28.5	28	28.2	28.2	28.4	81.3	19.9	2.6	1.9
28	59.20	26	32.4	22.5	27.4	28.7	28.2	28.3	28.3	28.4	79.6	19.7	3	2.2
29	59.07	26.1	32.7	22.4	27.3	28.8	28.1	28.3	28.3	28.4	79.4	19.9	3	2.5
30	58.06	27.2	33.5	22.7	27.6	28.9	28.2	28.4	28.3	28.4	74.1	19.6	5.1	3.9
31	56.13	27.1	32.4	23.4	27.9	28.9	28.3	28.4	28.3	28.6	76.4	20.1	4.1	3.7
Mean	759.27	25.9	31.2	22.7	27.6	28.5	28.2	28.4	28.4	28.6	85.5	21	2.1	1.8
Total													65.5	55.5
Departure from normal	+0.67	—0.9	+0.2	—0.4							+1.8	—0.8		

Date.	Wind.				Clouds.			Sunshine.		Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction. Upper.	Lower.				
		Km.	*Km.*		*0–10.*			*h.*	*m.*	*mm.*	
1	SW	262	23.5	WSW	4.9	A.-Cu. SSW	Cu. SW	8	40	3.5	≡° d a. ◟ ● p.
2	NE quad.	148	28.5	W	10	A.-Cu.	Cu.-N. WSW	0	35	13.4	● a. p.
3	SE quad.	143.5	13	SSW, WSW	10	Ci.-S.	N. SW	0	00	43.6	≡ a. ● a. p.
4	SW quad.	179	29	WSW	9.9	Ci.-S.	Cu.-N. W	0	20	.1	d° a. p.
5	SW quad.	148	18	W	5.2	Ci.	Cu.	9	50	.6	≡ ●° a. ◟ p.
6	SW quad.	161	19	SW	6.4	Ci.	Cu. W	8	35	2.5	≡° a. ◠ ⌐◹ ● p.
7	W quad.	182	31.5	NNW	7.3	A.-Cu. NE	Cu. NE	4	45	10.2	≡ a. ◞ ● ⌐◹° ◟ p.
8	W quad.	239	22	SWbyW	9.5	Ci.-S.	Cu. W quad.	2	10	.6	≡² ⌓ a. ⊤° ●° p.
9	W, NE quads	196	37	SWbyW	9.8	Ci.-S.	Cu.-N. NNW	1	20	2.2	d° ◠ a. ⌐◹° ●° p.
10	SE quad.	102.5	15	NW	9.2	Ci.-S.	Cu.-N. E, S	2	15	15.7	⊤ ● p.
11	E quad.	85	14	NEbyE	9.9	A.-Cu. E	Cu.-N. ENE, ESE	0	20	17.8	≡ ⊤ ● p.
12	Variable	76.5	7	SSE	8.9	A.-Cu. NNE	Cu.-N.	4	35	18.9	≡° a. ⌐◹ p. ● a. p.
13	N quad.	78.5	12	WNW	8.6	Ci.-S.	Cu.-N. NE, E	3	00	20.6	≡ a. ⊤° ● p.
14	NW quad.	115	13	SSE	9.1	Ci.	N. ESE	2	35	42.7	≡° a. ●² p.
15	ESE	134.5	11.5	ESE	8.1	A.-Cu.	Cu. E	4	40		⌓ ≡° a. ◟ p.
16	NE quad.	158	14.5	W, WNW	6.3	Ci.	Cu. E	7	30	1.4	≡° a. ⌐◹° ●° ◟ p.
17	NE quad.	90.5	10	E	9	Ci.-S.	Cu.-N. E	0	10	18.9	≡ a. ● ◟ p.
18	SE quad.	125	13	W	4.8	A.-Cu.	Cu. E	9	10		≡° a.
19	NE quad.	133	11.5	WSW	4.8	A.-Cu.	Cu. E	7	10		≡° a.
20	E quad.	120	11.5	SSW	5.5	A.-Cu.	Cu. E	5	50	7.4	≡° a. ● p.
21	N quad.	114	12	NW, NNW	6.8	A.-Cu. ESE	Cu. E	5	25	15.8	≡ a. ⌐◹ ● p.
22	N, NE	91.5	12	NE	8.9	Ci.-S.	Cu.-N.	0	00	.3	≡° a. ⌐◹° p. d a. p.
23	E quad.	129.5	14.5	NE	6.2	Ci.-S.	Cu. E	3	35	1.5	⌓° ≡ ● a.
24	E quad.	150	16.5	WNW	3.1		Cu. ESE	10	30		≡° a.
25	E	144.5	17.5	W	4.8	Ci.	Cu. E	7	55	7.1	≡ a. ● p.
26	NE quad.	107	13	WSW	4.8	Ci.	Cu.-N EbyN	8	25		≡° a. d° p.
27	NE	167	21	NNE	7.1	A.-Cu.	S.-Cu. ENE	5	50	.6	≡° a. p° p.
28	NE	144.5	19	NE	8.8	Ci.-S. SE	Cu. E	3	15		≡° a.
29	NE	176.5	19	NNE	6	A.-Cu.	Cu. E	6	20		≡ d° a.
30	NE quad.	278.5	25	NE	3.5	A.-Cu. E	Cu. NE, E	9	25		
31	NNE	329	31	NNE	7	Ci.	Cu. NE	7	25		d° a. ⌐◹° p.
Mean		151.9	17.9		7.2			4	53		
Total								151	35	245.4	
Departure from normal		—30.1			+ 0.6			—19	47	+52.5	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3]			Relative humidity (mean).[3]	Wind.[3]		Clouds.[3]			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.17	28	33.8	25.1	78.2	S quad.	1	8	Ci.-S. SE	Cu. SW, NE	2.8	○ ↙ ⌐⊿ d p.
2	58.42	26.5	28	24.6	83.5	SE	1.4	9.2	A.-S.	N. ENE, N	6.9	d° ● a. p.
3	58.09	27.3	30	24.4	75.6	SW quad.	1.6	5.2	A.-S.	Cu. SW	------	○ p.
4	58.70	28.2	33.5	25.4	73.5	SW quad.	1.2	8	Ci.-S. NE, E	Cu. SW, W	------	∩ a.
5	58.53	27.5	31.6	23.9	79	S quad.	1	3.4	A.-S. SW	Cu. SW	------	⊤ ↙ p.
6	57.63	27.3	33.1	24.4	82.7	Variable	.8	4.4	----------	Variable	2.8	d° a. p. ⌐⊿ p.
7	57.76	28.2	32.4	24.5	78.1	SE	1.2	6.2	Ci.-S., A.-S. ENE	Cu. SW	------	d° ⌐⊿ p.
8	58.32	28.7	32.2	26	71.9	WSW	2.4	7.8	Ci.-S. ESE	Cu. SW	------	
9	58.46	28.2	32.7	26	75	WSW	1.2	9.6	Ci.-S. NE	Cu. SW	4.8	↙ p.
10	58.44	28	32.7	23.4	76.4	SE	1.4	8	Ci.-S. NE	Cu. SSW	.5	● ∩ ○ a. ↙ p.
11	58.74	27.3	31.8	23.5	79	SE	1.2	7.8	A.-S. ENE, SSW	Cu.-N.	------	⌐⊿² d° a. ↙ a. p.
12	58.81	27	30.8	25	84	SE, WSW	1.2	9.4	A.-S., Ci.-S.	N. SSW	2.3	d° a. p. ∪ ↙ p.
13	58.56	27.4	31.1	23.9	79.7	SE	.8	8.8	Ci.-S. E	Cu. Variable	------	↙ ∪ p.
14	58.63	27.7	31.9	23.7	78	SE	.8	8.8	Ci.-S. NNE	Cu.-N. SW, E	------	↙ p.
15	59.33	26.8	32.2	24.7	81.4	WSW	1	9.6	Ci.-S. E	Fr.-N. NNE, N	2.8	⊤ a. d ∪ p.
16	58.98	28	33.6	23.6	76.9	SE	1.2	3.8	Ci.-S. NNE	Cu. NNE	------	⌐⊿ ↙ p.
17	58.92	27.6	32.2	24.3	79.5	S quad.	1	9.6	A.-S. ENE, NE	Cu. SE	------	∪ p.
18	59.52	28	33.6	23.3	75.4	Variable	1	9	A.-S. SW	Cu. ENE	------	∪ p.
19	58.91	27.2	31	23.5	81.4	Variable	1	6	Ci.-S. NE	Cu. ESE	8.4	● a. p. ⊤ p.
20	58.36	27.3	32.9	24	79	SE	1.2	6.2	A.-S.	Cu. ENE	11.2	d° a. ●² ⌐⊿ ↙ p.
21	58.39	26.4	30.2	23.7	80.2	S quad.	1	8.6	A.-S. NNE	N. ENE	1.5	d° ⊤ a. p. ● ↙ p.
22	58.45	26.6	31.9	22.8	81.7	Variable	.8	4.2	A.-S.	Cu.-N., Cu. E	------	⊤ a. p. d° ↙ p.
23	57.90	27.8	33.4	23.1	79.8	WSW	.8	9.4	Ci.-S. SE, ENE	Cu.-N. E	.5	○ ⌐⊿ d° p.
24	58.01	27.2	------	23.6	80.8	W quad.	1	8.2	Ci.-S. ENE	N. ENE, SSW	22.1	● a. d ●² ↙ p.
25	58.94	26.6	------	23.6	83	Variable	.8	8.8	A.-S.	Cu.-N. E	------	d a. ⊤ p.
26	58.30	27.9	------	22.8	74.7	Variable	.8	2.8	----------	Cu., Cu.-N. NE, ENE	------	↙ p.
27	57.70	26.3	------	23.4	84.8	SE, WSW	.6	9.6	Ci.-S. E	Cu., N. NE	27.4	● a. ●² ⌐⊿ ↙ p.
28	57.22	26.8	------	23.5	85.1	Variable	1	7.8	A.-S., Ci.-S.	Cu.-N., N. E, NE	12.7	d ● a. p. ⊤ p.
29	57.14	26.4	------	23.6	83.8	E quad.	.8	8	A.-S. E	Cu.-N. ENE	23.1	⊤ ●² a. p.
30	56.26	27.3	------	23.4	81.8	SW, quad.	1	8.6	Ci.-S. ENE	Cu.-N. E	5.1	d° ● a.
31	53	26.8	------	24.6	84.8	WSW	2	10	A.-S.	N. NNE	9.7	⊤ d° a. p. ● ↙ p.
Mean	758.15	27.4	32	24	79.6	----------	1.1	7.6	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	144.6	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.77	26.9	31.6	23.9	84.3	S, WSW	0.3	7.3	A.-Cu. S	Cu.-N. W	------	Ω² a.
2	58.44	24.6	26	23.2	90.4	SW quad.	1	9.8	----------	N., Cu.-N.	6.1	d° a. p.
3	58.40	27.2	32.5	22.9	78	S	1	5.3	Ci. NE	Cu. W	------	Ω² ≡ a. d° p.
4	59.31	27.3	31.4	23	80.2	SE quad.	.7	4.7	Ci.-S.	Cu. WSW	------	↙² Ω² a. ∞ Ω p.
5	59.13	27	31	22.7	85.5	SE, WNW	.3	3.2	Ci.-S. ENE	Cu.-N.	------	Ω² a. ∞ ↙° p.
6	58.16	27.1	30.8	23.5	84.8	NW, WNW	.3	3.3	Ci.-S. ENE	Cu.-N. W	------	Ω² a. ∞ Ω° p.
7	58.13	27.7	32.9	23.5	82.8	SW	.8	5.8	Ci.-S. SW	Cu.-N. SW	------	Ω²a. ∞ ⊤ Ω° ↙² p.
8	58.94	27.4	31.9	24.1	82.5	SW quad.	.7	8.3	Ci.-S.	Cu.-N. W	------	↙ Ω a. ∞ ↙² p.
9	58.91	27	31.9	23.6	85.8	Variable	.5	6.8	Ci.-S.	Cu.-N. W	------	Ω° a. p. ∞ p.
10	58.73	27.2	31.2	23.7	83.4	Variable	.7	4	Ci. NW	Cu.-N. W	------	Ω² a. ∞ Ω° ↙² p.
11	59.10	26.3	31.3	22.9	84.2	Variable	.5	6.2	Ci.-S., Ci.	Cu.-N. SE	------	Ω° ↙ a. ⌐⊿ Ω² p.
12	59.33	26.2	30.7	22.4	84	S	.7	6.2	A.-Cu. W	Cu.-N. E	------	Ω² a. ↙ p.
13	59	26.4	32.5	23	84.7	ENE	.3	4.2	Ci., Ci.-S. S	Cu.-N. E	------	Ω² a. ↙² p.
14	59.13	26.6	30.3	22.9	85.7	NW	.5	5.2	Ci.-S. E	Cu.-N. S	------	Ω² a. ∞ ↙² p.
15	59.72	26.4	31.2	23.2	86.5	Variable	.7	8	Ci. NE	Cu.-N. S	------	Ω a. p° p.
16	59.36	26.6	30	22.5	85.8	Variable	.5	5.5	Ci.-S. NE	Cu. W	------	Ω° p.
17	59.40	27.2	33	23.1	83.6	Variable	.7	6.8	Ci.-S.	Cu. SW	------	Ω² a. p.
18	60.06	26.6	31	23.7	85.7	E	.7	6.8	Ci.-S. N	Cu., Cu.-N. S	------	Ω² a. d° ⌐⊿ p.
19	59.54	26.6	30.5	23	86.3	SE quad.	1	6	Ci.-S. NE	Cu.-N. E	6.6	↙ Ω² a. ●° p.
20	58.82	27.5	31.9	23.7	82.9	NE	.8	3.8	Ci.-S.	Cu.-N.	11.7	Ω² a. d° p.
21	58.92	25.7	29	23	87	NE	.3	8	A.-Cu.	Cu.-N.	1	d ● a. Ω° p.
22	58.82	26.8	31.5	22.6	85.5	NE quad.	.5	4.2	Ci.-S.	Cu.-N.	12.7	Ω² a. ●° p.
23	58.26	25.1	28.7	23.8	93.5	WNW	.3	9.7	----------	Cu.-N.	10.5	●° a. ⌐⊿ d p.
24	58.25	26	30	23.5	90.2	NE quad.	.8	9.2	----------	Fr.-N., Cu.-N. E	1.5	●° a. Ω° p.
25	59.22	26.2	29.7	23.4	88.2	E quad.	1.3	7.2	A.-Cu. SE	Cu.-N. E	------	●° a. d° Ω° p.
26	58.73	26.6	30.6	22.9	87	Variable	.7	5.3	Ci.-S. ESE	Cu. E	6.4	Ω² a.
27	57.90	26.1	28.6	24.3	92.3	Variable	.7	10	----------	Cu.-N. E	11.6	d° ● a. d p. ⌐⊿°
28	57.51	26.7	29	24.7	88.5	NW	1	7.7	Ci.-S. N	N.-cf. NE	3	d a. ↙ p.
29	57.64	26	29.1	23.7	90.8	NW quad.	.5	8	Ci.-S. N	Cu.-N. E	12	⌐⊿ ● a. d a. p.
30	55.83	26	27.7	23.5	90	SW	.7	9.8	----------	N.	20	●° a. d° ●° p.
31	51.29	25.4	26.6	24.2	89.2	SW quad.	5.7	10	----------	Fr.-N. SW	113.6	↙² ↙° ●² a. ↙ ●² p.
Mean	758.48	26.5	30.5	23.4	86.1	----------	.8	6.7	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	216.7	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.74	27.5	31.3	23.4	73	SW quad.	7.1	5.5	Ci.-S.	Cu. WSW	3	≡° ☊ a. ◸ ● p.
2	58.73	24.6	25.7	23.1	85.4	SW, NW	4.4	9.2	----------	N. WSW	5.3	☊ ┬ a. ● a. p.
3	58.22	26	30	23.2	77.9	Variable	7.3	5.8	A.-Cu.	Cu. W, WSW	.5	≡° ☊ ●° a.
4	59.06	26.8	30.5	23	74.8	SW, WSW	7.5	4.5	Ci.	Cu. SW	--------	≡° ☊ a. ◸ ∞ p.
5	59.16	27.4	31.6	23.4	74.6	ENE, NW	7.5	3.8	Ci.	Cu. ENE	--------	≡° ☊ a. ◸ a. p.
6	58.11	26.9	31.3	23.5	78.7	S	5.4	3.7	Ci.	Cu.-N. NE	5.9	≡° ☊ a. ◸ ● p.
7	58.22	26.8	31.6	23.7	78	Variable	5.6	4	Ci., Ci.-S.	Cu. NE, ENE	--------	☊ a. ◸ ◟ p.
8	58.67	27	30.5	23.6	75.8	SW	6.5	7.2	Ci.-S.	Cu., Cu.-N. SW	1.1	☊ ◸ ● a. d p. ◟
9	58.80	26.5	30.6	24.2	78.5	SSW, SW	4.9	7.8	Ci.-S.	Cu. SW	.3	≡° ☊ a. ◟ d p. ○
10	58.79	26.3	31.5	23.8	80	Variable	5.2	7	Ci.-S.	Cu. SW	8.6	≡° ☊ a. ● ◸ p.
11	59.23	25.5	30.5	23.3	84.1	SSE, SW	4.9	7.3	Ci.-S.	Cu.-N. S	37.4	☊² a. ●² ◸ ◟ p.
12	59.26	26.2	30.5	23.5	80.7	S, SSW	4.6	5.7	Ci.-S.	Cu., Cu.-N. SE	--------	☊ a. ◡ p. ◸ a. p.
13	59.04	26.2	29.8	23.5	79.1	E	7.4	3.3	Ci., Ci.-S.	Cu. E quad.	--------	≡° ☊ a. ◸ p.
14	59.15	26.8	30.2	23.8	77.7	E	6.6	5.3	Ci.-S.	Cu. Variable	--------	≡° ☊ a. ◸ a. p.
15	59.61	25.8	30.5	23.2	82.7	SE	4.7	8	Ci.-S.	Cu.-N. ENE	18	☊² a. ● ◸ ◡ p.
16	59.26	26	30.5	22.4	79.7	Variable	6.1	3.8	Ci.	Cu. ENE	--------	☊ a. d° p.
17	59.46	26.9	30.6	23.5	77	SE, ENE	6.8	6	Ci., Ci.-S.	Cu., Cu.-N. E	--------	≡° ☊ a. ◸ p. ◟
18	59.84	26.6	30	23.7	78	E	6.8	4.5	Ci., Ci.-S.	Cu. E	--------	☊ a. ◸ ◟ p.
19	59.26	26.6	30.2	23.6	76	NE quad.	7.5	3.5	Ci.	Cu. E	3	≡° ☊ ●° a. ◸ p.
20	58.82	27.2	30.6	24.1	75.3	E	8.6	4.2	Ci.	Cu. E	--------	≡° ● a. ◸ p.
21	58.75	26.4	30.2	23.8	77.9	SE, E	7	4.7	Ci.-S.	Cu., Cu.-N. NE	.6	≡° d a. ◸ p.
22	58.66	27.1	30.6	23.8	75	E	6.9	5.2	Ci., Ci.-S.	Cu. ENE	--------	≡° d a. ◸ ◟ p.
23	58.16	27.2	30.8	23.5	78.7	ENE	8.9	6.8	Ci.-S.	Cu. ENE	32.5	☊ a. ●² p. ◸ a. p.
24	58.24	26.6	30.7	23	79.9	NE quad.	9.6	7.5	Ci.-S.	Cu. E	22.9	● d a. ● ◸ p.
25	58.98	27	30.5	23.7	77	NE quad.	8.5	6.2	Ci.-S.	Cu.,Cu.-N. E	--------	● a. ◸ p.
26	58.74	26.7	30.3	23.6	76.7	NE quad.	10.5	3.5	Ci.	Cu. E	1.3	≡° ☊ a. ● ◸ p.
27	57.94	27	31	23.7	76.5	E	8	7	A.-Cu. E	Cu., Cu.-N. NE	102.1	≡° ☊ a. ◸ ◟ p.
28	57.61	26.5	30.3	22.8	81.8	N quad.	8.6	7.2	Ci.-S.	Variable NE	--------	●² d ○ a. ◸ a. p.
29	57.40	26.6	30.2	24	76.8	NE quad.	8	5.7	Ci., Ci.-S.	Cu. ENE	--------	☊ a. ◸ p.
30	56.29	25.5	29.5	23.5	85.7	N	4.3	8.2	Ci.-S.	Cu.-N. N	50.8	≡° ● a. ◸ d p. ◟
31	52.86	25.6	27.8	23.9	88.8	WSW	7.3	9.7	----------	Cu.-N. NNW	90.9	● a. p.
Mean	758.49	26.5	30.3	23.5	78.8	----------	6.9	5.9	----------	----------	--------	
Total	--------	------	------	------	-------	----------	--------	--------	----------	----------	384.2	

ILOILO

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.99	27.2	29.5	24.2	83.3	SW	12.8	6.8	Ci., Ci.-S.	Cu.	0.3	● a.
2	58.75	26.3	27.6	24.5	79.8	SW	13.3	8.8	Ci.-S.	Cu.	8.6	● p.
3	58.61	25.4	27.5	22.7	83.8	SW	15.2	9.2	Ci.-S.	Cu. SW	--------	≡ a. d a. p.
4	59.25	26.6	29.1	24.2	80.5	SW	12.9	8.2	A.-Cu.	Cu.	--------	
5	59.45	26.7	31.5	22.9	82.2	NW, SW	5.1	2.8	Ci.	Cu.	--------	☊ a. ◟ p.
6	58.55	27	31.9	24	84.3	NW, SW	4.4	5	Ci.	Cu.	4.8	☊ a. ◸ ◟ ● p.
7	58.51	26.1	30.5	23.4	86.7	SW	6.8	7.2	Ci.-S.	Cu.	3	┬ ● ◸ p.
8	59.08	27	29.5	23.4	80.8	SW	16.2	7.8	Ci.-S. E	Cu.	--------	◟ p.
9	59.15	27.2	29.6	23.8	78.7	W	9.3	8.2	Ci.-S.	Cu.	--------	◟ p.
10	59.16	25.8	29.8	23.4	87.2	N	5.1	9.5	Ci.-S.	Cu.	16.8	☊ a. d ● p.
11	59.59	25.4	30.4	22.9	87.2	SW, N	4.4	9.2	Ci.-S.	Cu.	.8	┬ d ● p.
12	59.75	25.7	30.4	23.3	86	N quad.	5.5	8.7	Ci.-S., A.-Cu.	Cu.	1.8	◸ a. ● p.
13	59.21	26.9	31.7	22.7	79.8	NE	6.5	5.3	Ci., A.-Cu.	Cu. NE	--------	◟ p.
14	59.68	26.5	32	23	82 8	E quad.	5.4	8.8	Ci.-S., A.-Cu.	Cu.	31.2	┬ ◠ ● ◸ p.
15	60.26	25.6	30.3	23	86 2	E, N	4.8	9	Ci.	Cu.	--------	d ◟ p.
16	59.62	26.6	31.9	23.3	81	E, N	4.9	7.2	Ci., A.-Cu.	Cu.	--------	◸ d ◟ p.
17	59.81	26.9	32	23.4	82.9	NE	6.8	8.8	Ci.-S.	Cu. NE	--------	◟ a. p.
18	60.38	26.1	29.9	23.8	84.8	NE	9.2	8.8	Ci.-S.	Cu. N	--------	◟ a. d ▱ p.
19	59.75	27.1	31.6	23.5	79.4	NE	11.4	6.7	Ci.	Cu. NE, N	4.1	● a. ◟ p.
20	59.14	27.4	32	23.9	76.3	NE	10.2	4.8	Ci.	Cu. NE	.5	☊ a. ◟ a. p.
21	58.98	27.4	31.6	23.8	77.5	NE, E	11.2	6.8	Ci.-S. E	Cu.	--------	◸ a. p. ┬ ◟ p. ●°
22	59.01	27	32.1	23.9	81	NE quad.	7.9	7	Ci.-S.	Cu. NE	1.5	☊ a. ┬ ● ◸ p. ◟
23	58.41	27.5	32.5	24.5	81.7	NE	11.1	9	Ci.-S.	Cu. E, N	6.1	◟ a. p. ◸ ● d p.
24	58.15	27.2	32.1	23.9	81	NE quad.	12	7.2	Ci.-S.	Cu.	--------	◟ a. p. d p.
25	59.36	27.2	31.2	23.9	79.2	NE quad.	10.4	7.5	A.-Cu. E	Cu.	--------	◟ d a.
26	58.95	27.5	31.7	24.7	77	NE	3.2	3.5	Ci.	Cu. NE	2	d ◠ a. ◟ ● ◸ p.
27	58.49	27.6	32.5	24.5	76	NE quad.	10.4	7.8	Ci.-S.	Cu. NE	31.7	d² a. ◟ ● p.
28	58.11	25.9	29.9	22.7	86.2	N	13.1	8.2	Ci.-S.	Cu. NE	1.8	● a. p.
29	57.98	27.5	31.6	24.5	81.3	NE quad.	12.4	6.2	Ci.-S.	Cu. NE	--------	●° ◠ a. ◟ p.
30	57.04	26.2	31.2	23.9	87.3	N	7.4	8	A.-Cu.	Cu.	16.7	☊ a. ◸ ┬ ● p. ◟
31	54.60	25.7	30	23.8	90.8	NW quad.	4.2	9.8	Ci.-S.	Cu.-N. N	37.8	● a. p. ◸ ◟ p.
Mean	758.90	26.7	30.8	23.7	82.3	----------	9.1	7.5	----------	----------	--------	
Total	--------	------	------	------	-------	----------	--------	--------	----------	----------	169.5	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.76	27	32.1	23.4	81.3	S	5.4	6.5	Ci.-S.	Cu.	14	☊ ≡° a, ◟ p.
2	58.74	23.1	25.9	22.2	96	E quad.	4.6	9.8	Ci.-S.	Cu.-N. W	41.6	● ≡ a. p.
3	58.40	25.3	30.1	21.9	85.8	S, NE	---	9.7	Ci.-S.	Cu.-N. SSW	10.2	≡° a. p. ⌐◹ ● p.
4	59.34	25.8	31.5	22.2	85.1	SE quad.	7	5.8	Ci.	Cu.-N.	------	≡° d a. ◟ p.
5	59.36	26	32.5	21.4	83.4	S, N	5.1	6.3	Ci.-S.	Cu.-N. E	2.5	☊ ≡° a. ⊤ d ◟ p.
6	58.29	25.9	31.4	22.1	84.3	N, WSW	5.3	4.7	Ci., Ci.-S.	Cu.-N.	2.5	☊ ≡° a. d ◟ p p.
7	58.32	25.7	31.2	21.6	87.3	Variable	4.3	7.2	Ci.-S.	Cu.-N.	.5	☊ ≡° a. ◟ ⊤ p.
8	59.02	26.2	30.3	23	84.7	SE quad.	5.9	9.2	Ci.-S.	Cu.-N.	1.3	≡° ⊤ a. ◟ p. d
9	59.01	25.6	29.9	23.1	88	N, S	5	9.8	Ci.-S.	Cu.-N. S	------	≡° ⌐◹ a. ◟ p.
10	58.90	25.1	30.7	22.2	88.2	N quad.	4.9	9.5	Ci.-S.	Cu.-N. SE	------	≡° a. ⊤ ◟ p.
11	59.45	24.7	31.2	21.5	89.3	N	4.6	6.8	Ci. E	Cu.-N.	1.3	☊ ≡° a. d ◟ ∪ p.
12	59.50	24.6	30.4	21	88	N	5.4	7	Ci. E	Cu.-N.	8.7	☊² ≡° a. ⌐◹d ◟ p.
13	59.16	24.9	31.6	20.4	86.2	N	4.7	5.7	Ci. E	Cu.-N.	8.6	☊ ≡° a. ⌐◹ ● ◟ p.
14	59.39	25.7	33.1	21.1	84.5	N, S	4.9	7.5	Ci. S	Cu.-N.	------	☊ ≡° a. ⊤ ◟ p.
15	60.16	24	30.5	22.1	93.2	N quad.	4.7	9.3	Ci.-S.	Cu. NbyW	2.1	☊ ≡° ⌐◹ a. d ◟ p.
16	59.49	24.8	30.6	20.4	89.3	N	4.7	6.3	Ci.-S., Ci.	Cu.-N.	1	☊ ≡° d a. ◟ p.
17	59.60	24.6	30.5	21.6	89.3	N	4.3	8	Ci.-S.	Cu.-N.	.6	☊ ≡° d ⊤ ◟ p°
18	60.12	25	30.7	21.2	86.2	N	4.3	8.3	Ci.-S. E	Cu.-N.	1.3	☊ ≡° a. d ⊤ ◟ p.
19	59.59	25.4	32.7	19.8	83.7	N, S	5.5	5.2	Ci.	Cu. EbyN	2.3	☊ ≡° a. ⌒ d ◟ p.
20	58.98	25.4	31.5	21	87.8	N quad.	4.3	6.7	Ci.-S.	Cu.-N.	------	☊ a. p° ⌒ ◟ p.
21	58.95	25.2	29.5	20.5	85.7	Variable	4.2	8.3	Ci.-S.	Cu.-N.	------	☊ a.
22	58.98	25.4	30.2	21.3	85.8	N	4.2	6.5	Ci. SSE	Cu.-N.	14.5	● a. ⊤ ◟ p.
23	58.33	25.7	31.9	21.5	85.4	N quad.	5	8.5	Ci.-S.	Cu.-N.	8.6	☊ a. ⊤ ◟ p p.
24	58.50	25.2	31.8	22.2	88.8	NE quad.	---	9.7	Ci.-S.	Cu.-N. E	2.3	⌐◹ ◟ ◞° p.
25	59.27	25.5	29.2	21.4	84	N quad.	3.6	8.2	Ci.-S. E	Cu.-N.	.3	≡° a. p° p.
26	58.89	25.1	31.2	20.7	87.4	NE, SW	5.4	8.2	Ci.-S.	Cu.-N. EbyN	4.1	☊ ⌐◹ p ⊤ ∩ ≡ ◟
27	58.14	26	30.7	22.2	86.4	N	3.7	10	Ci.-S.	Cu.-N.	4.1	☊ ≡° a. ⊤ ◟ p.
28	57.70	25.4	29.5	22.9	87.7	N quad.	5	8.8	A.-Cu. SE	Cu.-N. E	11.5	● a. ◟ p.
29	57.75	25	29.9	21.5	86.7	N	4.1	8.7	Ci.-S.	Cu.-N. NE	11	☊ ● ⊤ a. d ◟ p.
30	56.33	25.5	28.5	21.5	89.7	N, NW	3.1	9.8	A.-Cu. E	Cu.-N. NbyW	31.1	≡° a. ◟ ●² p.
31	50.43	24.8	27	23	95	NW quad.	16.9	10	Ci.-S.	Cu.-N. NW	98.5	≡° ● a. ◞ ● p.
Mean	758.61	25.3	30.6	21.7	87.2	---	5.2	7.9	---	---	---	
Total	---	---	---	---	---	---	---	---	---	---	284.5	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.06	28	32	25	82.6	Variable	0.2	6.7	Ci.-Cu. E	S.-Cu., cu. sw quad	1.5	☊ a.
2	58.85	24.7	27.7	22.5	92.8	Variable	.3	10	---	N. WNW	30.5	d ● a. p.
3	58.50	26.5	32.6	22.3	87.7	Variable	.0	7.3	Ci.-S. E	Cu. W, SW	------	d p.
4	59.70	27.2	33.8	23.5	84.3	NW	.3	6.3	Ci.-S. E	Cu. SW	2.6	● p.
5	59.83	27.8	34	24	84	NW quad.	.7	5.7	Ci.-S. E	Cu. SW	------	d p.
6	58.78	27.6	35	24.3	82	NW quad.	.5	3.8	---	Cu. N, NNE	.5	≡ a. ●° p.
7	58.67	27.2	33	24.2	87	NW	.0	5.7	Ci. W	Cu. N	------	☊² a. ○² a. p.
8	59.10	27.7	33.2	24	84.5	NW quad.	.5	6.5	Ci.-S. SSE	Cu. N	------	☊² ○° a.
9	59.37	27	32.5	23.9	87.7	Variable	.3	7.5	Ci., Ci.-S. SE	Cu.-N.	16.3	☊ ○² a. ● ⌐◹ p.
10	59.46	27	33.3	23.8	85.6	E, SSE	.3	8	Ci. S	Cu. NNE	------	☊² a. p. d ◟ p.
11	59.87	27	33.6	24	85.2	N, E	.7	6.3	Ci.-S. SSW	Cu., Cu.-N. E	------	☊² a.
12	59.99	26.4	34	23.6	86.7	WNW	.8	5.8	Ci.-S. W	Cu.-N. E	1.3	● ⊤ p.
13	59.60	27.4	33.8	23.2	81.2	Variable	.7	5.5	Ci.-S. SW	Fr.-Cu. E	3	☊² a. ● ⊤ p.
14	60.07	27.1	34	23.2	84.3	Variable	.5	7.3	Ci.-S. WSW	Cu. E	------	⊤ p.
15	60.60	25.8	34.8	23.6	90.2	W quad.	.7	7.3	Ci.-S. SW	N. ESE	61	☊ a. ●² ⌐◹ p.
16	60.02	26.8	33.2	23	85.7	W quad.	.5	6.7	Variable	Cu., N. NNW, N	23.1	☋² ⊕² a. ●² ⌐◹ d p.
17	60.39	26.2	32.2	23.3	86.8	N quad.	.5	8	Ci. W	Cu.-N. ESE	------	
18	60.90	26.2	31.2	24	88.5	WNW	1.2	8.3	Ci.-S. SW	Cu.-N. E, NE	4.5	○° a. ● a. p.
19	60.54	25.8	33	23	87.5	NW quad.	1.3	5.2	---	Fr.-Cu. NE	24.4	●° a. ⌐◹ ●² p.
20	59.68	27.6	33.8	24	82.8	E quad.	1	4.8	---	Cu. NE	------	d ◟ p.
21	59.42	26.9	31.6	24	84.9	NW quad.	.5	7.3	Ci.-S. SW	Cu.-N. E	------	☊ a.
22	59.70	27	32.5	24	86.5	Variable	.5	5.8	Ci.-S. SW	Cu.-N. E	3	● a. p. ☋² p.
23	59.20	26.7	31	24.3	86.7	NW	.8	8.7	Ci.	Cu.-N. ENE	8.9	☋² a. ○² a. p.
24	59.20	26.4	33	23.5	88.2	W quad.	.3	8.3	Ci.-S. SW	Cu.-N. E	2.8	● a. p. ⊤ p.
25	60.12	25.8	30	24	88.5	E	.2	7.2	Ci.-Cu. SW	N. ENE	4.1	d ● ⌒ a.
26	59.59	26.6	33	24	87.2	Variable	1.2	6.5	Ci.-S.	Cu.-N. ENE	1.5	☋² ● a. ◟ p.
27	58.83	26.1	29.4	24.5	90.1	NW quad.	1.2	8.7	Ci., Ci.-S. SSW	Cu.-N. NEbyE, ENE	29.8	⊤ a. ● a. p.
28	58.49	25.8	29.5	22.7	90.7	Variable	.3	8.7	Ci. SSW	N. NEbyE	8.4	●² ⌐◹ a. ○² p.
29	58.34	25.4	28.8	24.1	92.2	NW quad.	.8	8.2	Ci.-S SW	Cu.-N. ENE	19.8	d a. ● a. p. ◟ p.
30	56.74	25.7	27.8	24	91.5	N	1.2	9.2	Ci.-S. SW	N., Cu.-N. NE	4.6	● d a. p. ◟ p.
31	48.02	26.2	27.6	21.5	86.5	NW	7.2	10	---	N. N	69.1	◞ ● a. ●² ◞² p.
Mean	759.05	26.6	32.1	23.6	86.8	---	.8	7.1	---	---	---	
Total	---	---	---	---	---	---	---	---	---	---	320.7	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not ap plied, —1.81 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.89	27.4	31.7	24	78.1	Variable	1	6	Ci. NE	Cu. W, SW	------	
2	58.53	24.8	26.5	23.4	92.8	Variable	.7	8.3	Ci.-S.	N. N	7.9	☊ a. ●° a. p. ⊤ p.
3	58.31	25.4	31	23.2	90.7	S quad.	.7	10	Ci.-S.	N. N	25.4	d ☊ a. ● p.
4	59.16	26	31	23.5	84.7	S quad.	.8	8.2	Ci.-S.	N. SE	3.8	● ⌐◹ p.
5	59.30	26.6	32.7	21.8	81.8	N quad.	.8	1.8	Ci.	Cu. W	------	☊ a. ◟ p.
6	58.30	27.3	32.2	23.5	83.2	N quad.	1.2	3	Ci.	Cu. Variable	22.9	◟ p.
7	58.31	27.3	32.2	23.4	83.8	Variable	1	5.3	Ci.-S. N	Cu.-N.,N.SE,NW	------	⌐◹° ●² ☊ a. ◟ p.
8	59.05	26.6	33.2	23.2	82.7	SSW	.8	6	Ci.-S.	N. S	1.5	◟ ☊° ⊤° ⌐◹ ●°
9	58.93	26.7	31.7	23.4	84	SW quad.	.8	6.7	Ci.-S.	N.	5.1	☊ a. ⊤ ⌐◹ ● p.
10	59.08	26.1	31.6	23	86.8	Variable	.8	7.3	Ci.-S.	N. N	8.9	⊕ ○ a. ⊤ ● ⌐◹ p.
11	59.62	25.7	30.1	23.5	90.2	N	.5	7.7	Ci.-S.	N. S, SW	5.8	☊ a. ● a. p. ⌐◹² p.
12	59.93	25.8	29.8	22.8	88	N quad.	1.2	7.5	Ci.-S.	Cu.-N. SE, NW	6.1	☊ ⊕ ○ ⊤ ● ◟
13	59.24	26.5	30.8	22.6	85	N, S	1	5.3	Ci.	Cu. S, E	16	◟ ⊽ p.
14	59.76	25.9	28.9	23.1	88.3	S quad.	1	9.2	Ci.-S.	N. SE, NW	23.6	● a. ⌐◹ ◟ ●² p.
15	60.32	26.3	30.7	22.7	85.7	NNW	.7	9.2	A.-Cu. N	Cu. NW	2.3	☊ a. ⌐◹ ◟ ●° p.
16	59.73	26.8	30.5	23.7	86.3	NW quad.	.8	5.8	Ci.-S., Ci.	N. N	10.4	☊ a. ⌐◹ ⊽ ◟ ●° p.
17	59.98	25.6	28.5	23.6	90.5	N	1	9.3	Ci.-S.	N. N	28	☊ ●² ◟ ⊽ ∪ d°
18	60.96	23.7	26.5	21.6	96	SE quad.	.7	9.7	Ci.-S.	N. E	43.5	●² a. ⌐◹ a. p. ☊ p.
19	60.11	25.7	30.5	22.1	87.6	E quad.	1.2	6.8	Ci. E	Cu. E	35.3	⌐◹ ●² ◟ p.
20	59.44	26.4	30.5	23	84.2	N quad.	.8	3.8	Ci.	Cu. E	8.1	⌐◹ ◟ ● p.
21	59.14	26.9	31.6	24.2	85.2	N quad.	1.3	6.8	Ci.-S. NE	Cu.-N. N, NE	------	☊° a. ◟ d° p.
22	59.03	27.6	31.1	24.9	84.8	NE quad.	1.3	7.2	Ci., Ci.-S.	Cu. E	------	⊕ ○ ◟ p.
23	58.79	27.8	31.6	26	82.5	NE	2.2	7.7	Ci.	Cu. NE	12.9	◟ ⊤° p ⌐◹ ●° p.
24	58.71	26.6	31.7	24.1	86.5	NE	1.8	7	Ci.-S. NE	N.,Cu. NE, E	1.8	p ● a. ◟ ⌐◹ ●° p.
25	59.46	27	31.2	24.2	83.2	N, NE	1.5	6.3	Ci.	Cu., N. E	.3	d° a. p. ⊤° ◟ p.
26	59.19	27.6	31.5	24.4	81	NE quad.	1.7	6	Ci.-S.	Cu., N. NE	11.9	◜² a. ◟ p° ⌐◹ p.
27	58.50	27.9	31.2	25.2	80	N quad.	1.3	8.5	Ci., Ci.-S.	Cu. NE	7.9	◟ ⌐◹ ●° p.
28	58.42	26.5	29	24.2	87.3	NE	1.8	7.8	Ci.-S. NE	N. NE	.8	●° p a.
29	58.14	27.1	31.3	24.4	85.7	NE	1.3	6.2	Ci.	Cu., N. NE	45	⊤° ⌐◹ ◟ ●² p.
30	56.86	25.8	29.9	24	92	NNW	2	9	------	N. N	13.4	● a. p. ⊤° p.
31	54.32	27.2	30.3	23.5	86.7	NNW	3.5	8	Ci.-S.	N. N	43.1	●° a. ⊤° ◞° ●² ◟ p.
Mean	758.95	26.5	30.7	23.6	86	------	1.2	7	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	391.7	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.80	28.1	30.8	24.9	80.2	SW quad.	1.7	7	Ci.-S.	S.-Cu. WSW	5.1	◟ a.
2	58.46	24.9	26	23.6	93	SW	1.5	9.5	A.-Cu.	N. SW	46.2	●° a. ● p.
3	58.16	26.8	29.7	24.2	86.6	SW	1.8	8.5	A.-Cu. WSW, W	S.-Cu. SW	1	●° a. p° p.
4	59.41	27.3	31.7	23.9	85	Variable	1.2	5.5	Ci.-S. NE	S.-Cu. SW	------	◟ p.
5	59.63	27.2	33.4	22.9	82.3	Variable	.7	2.8	Ci.	S.-Cu. E	38.1	●² ◟ ⊤ p.
6	58.60	26.8	33.3	22.8	88	N	1	4	Ci.-S.	S.-Cu. N, NE	2.5	⊤° d ◟ p.
7	58.35	25.8	29.7	22.5	90.4	NW quad.	1	5.3	Ci.-S.	S.-Cu. N	1.8	⊤ d ◟ p.
8	58.89	27.6	30.6	23.6	84.8	SW quad.	1.8	7.3	Ci.-S.	S.-Cu. W	------	≡° a. d a. p.
9	59.18	27.3	31.1	24.1	86.3	W quad.	.7	8.2	Ci.-S.	S.-Cu. W	9.1	⊤° a. ● ◟ p.
10	59.26	26	30.7	22.9	87.5	N quad.	1	7.3	Ci.-S. N, NE	S.-Cu. ESE	------	◟ p.
11	59.78	25.6	33.2	22.6	87.3	N	1	4.2	Ci.-S.	Cu.-N. E	2.3	⊤ ●° ◟ p.
12	59.76	25.3	31.7	21.6	89	NW quad.	1.2	5.7	Ci.-S.	Cu. E	14	☊ a. ⊤ ● ◟ p.
13	59.60	25.4	31.7	21.4	90.3	N	.8	6.5	Ci.-S. E	S.-Cu. NE	15.7	☊ a. ● ◠ ◟ p.
14	59.86	26.3	31.1	23.3	87.2	NE quad.	1	6.5	Ci.-S. N	S.-Cu.	------	◟ a. p. ∪ p.
15	60.26	25.9	31.7	22.7	87.3	N quad.	1	8.2	Ci.-S.	S.-Cu. NNW	16.6	d° ⊤° ● ⌐◹ p.
16	59.91	26.5	32.2	22.6	85.2	N	1	4.7	Ci.-S.	Cu. N	------	◟ ⊤ ∪ p.
17	60.10	26.2	31.7	22.6	85.3	N quad.	1	6.8	Ci.-S. NE	S.-cf. NE	------	∪ a. ⊤° ⊽ ◟ p.
18	60.92	25	28.4	22.2	91	N quad.	1.2	7.5	Ci.-S.	S.-Cu. NE	8.2	d ● a. ⊽ ◟ p.
19	60.22	25.9	32.6	21.1	82.8	N	1.3	2.5	A.-Cu.	Cu. NE	------	☊ a. ⊽ p.
20	59.63	25.7	32.2	22.6	87.8	N quad.	1	6	Ci.-S.	S.-Cu. ENE, NE	18.6	● ⊤ ◟ p.
21	59.46	25	29.3	22.3	91.3	N	.8	6	A.-Cu. ENE	Fr.-N. ENE	2.1	⊤° ☊ d° a. d p.
22	59.62	24.4	29.9	22.6	93.5	N	1	6.3	Ci.-S.	S.-Cu. ENE	7.9	d° a. ●° ⊤ ◟ p.
23	59.01	25.9	32.7	22.7	88	NE quad.	1.2	7.3	Ci.-S. SSE	S.-Cu. ENE	.5	⊽ d° a. ⊤° d ◟ p.
24	59.16	26.4	33	23.3	85	NE quad.	1.3	4.5	A.-Cu. ESE	S.-Cu. E	------	◟ p.
25	59.72	25.7	31.6	21.6	86.5	N quad.	1.2	3.7	A.-Cu. E	S.-Cu. ENE	2	☊² a. d² ◟ ⌐◹ p.
26	59.55	26	33.2	22.2	85.2	N, NE	1.2	3.8	A.-Cu.	S.-Cu. ENE, NE	2	☊ a. d² ⊤ ◟ p.
27	58.71	25.5	31.6	21.6	88.8	N quad.	1.2	6.2	A.-Cu.	S.-Cu. NE	21.4	☊ ≡° a. ● ◟ p. ⌐◹
28	58.42	26.4	30.7	23.5	88.5	N quad.	1	7.8	Ci.-S.	S.-Cu. NE	------	●° d° a. ◟ p.
29	58.36	25.7	31.3	22	87.7	NNE	1	6.3	Ci.-S.	S.-Cu. NE	29.8	≡ ☊ ⊤° d ● ⌐◹ ◟
30	56.81	25	28.2	23.3	94	N quad.	.8	9.7	A.-Cu.	N. NE	48	●° a. ● ◟ ⌐◹ p.
31	51.52	25.4	27.4	24.5	90.7	N quad.	2.2	9.8	A.-Cu.	N. NNE, N	49.6	● a. p° ◞ p.
Mean	759	26	31	22.8	87.6	------	1.2	6.3	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	342.5	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.25	27.7	33	23.1	79.5	W quad.	6.7	3.8	Ci.	Cu. WSW	------	● a. ◟° p.
2	57.44	25.9	28.5	23.4	88.2	W quad.	7.4	9	Ci.-S.	N., Cu. W	90.2	● ◩ p.
3	57.34	24.4	27.6	22.8	94.8	SW quad.	6.5	10	Ci.-S.	Fr.-N. WSW	17.2	● d a. p.
4	58.92	26.6	32	22.8	85	SW	5.7	6.5	Ci.-S.	Cu. W, SW	------	≡° a. ◟ p.
5	59.18	26.9	33	22.2	82.3	NE	3.2	3.2	Ci.-S.	Cu. SW, E	.8	≡° a. ● ◟ p.
6	58.40	27.4	32.3	22.5	81.2	E quad.	5.6	2	Ci.	Cu.	------	≡° a. ◟ p.
7	57.94	26.6	33.5	22.4	82	W	4.5	7.2	Ci. E	Cu. NW	------	⊤ ◟ d° p.
8	58.18	26.5	31	23.7	85	W, WSW	7.6	10	Ci.-S.	Cu.-N. WSW	1.5	◟ p.
9	58.44	25.4	30	23	90.2	W, SW	------	8.2	Ci.-S.	N., Fr.-N. WSW, SW	8.9	⊤° ● a. ◟ p.
10	59.02	25.9	31.7	21.5	82.8	ENE, NE	4.3	8.3	Ci.-S.	Cu.-N. S	------	◟ p.
11	59.50	25.9	31.2	22	86.4	Variable	5.2	7.3	Ci. NNW	Cu., cu.-N. NNE, N	2.3	d² ● ◟ p.
12	59.66	25.2	30.6	22	87.7	NE	6	9.2	Ci.-S. N	Cu.-N. NNE, N	------	≡° a. d° p.
13	59.27	26.2	31	20.9	81.5	E quad.	5	5	Ci., A.-CU. WNW, E	Cu.	------	≡° a. ◟ p.
14	59.67	25.7	31	22.1	87	NE quad.	5.3	6.7	Ci.-S., Ci.	Cu. NE	6.1	≡° ● a. ● p.
15	60.19	25.7	29.5	23	88.5	ENE	8.4	8.8	Ci.-S.	N., cu.-N. NE, ENE	29	d ● p.
16	59.57	26.6	31.3	21.9	82.8	E, NE	5.7	3.2	A.-Cu. N	Cu. NE	62.2	◟ p.
17	60.32	25.1	27.5	22.2	90	NE	8.6	8.7	Ci.-S.	N., Fr.-N. E	32.3	●² a. d ∪ p.
18	60.67	26.8	30	24.5	79.8	NE	11.6	7.2	Ci.-S., Ci.	Cu.-N., Cu. NE	4.1	◟° p.
19	60.05	27.8	32	23.6	75.1	NE	11.1	3.7	A.-Cu. NE	Cu. NE	------	● a.
20	59.51	27.6	32.5	23.5	77	NE	9.8	2.5	Ci.-S. NE	Cu.	------	
21	59.33	26.6	31	24.7	84.3	NE	------	6.8	Ci.-S.	N, NE	9.4	● a.
22	59.34	27	30.6	24.7	85.5	NE	7.4	8.5	Ci.-S.	Cu-N., CU. NE, ENE	27	● ⊤ a. ●° ◟° p.
23	59.25	26.1	28.5	23.1	87.5	NE	11	7.3	Ci.-S.	Fr.-N., Cu. NE	23.7	● a. ◟ p. d a. p.
24	58.99	26.9	30.7	23.5	81.5	NE	11	4.8	Ci.-S.	Fr.-N., Cu. NE	.3	● a. ◟° p.
25	59.69	27.1	30.6	24	80.6	NE	10.9	4	Ci., A.-Cu.	cu., cu-N. NE, ENE	9.2	● a. p.
26	59.50	27.6	32	24.1	80.5	NE, ESE	9.8	3.7	Ci.-S.	N. NE	7.8	d² a. ● ◟° p.
27	58.66	28	32	24.9	77.5	NE	11.5	1.8	------	Fr.-Cu., Cu NE	2.5	● a. ◟ p.
28	58.61	26.5	27.9	24.4	86.5	NE quad.	12.9	8.5	Ci.-S.	Fr.-N. NE	17.3	● ⊤ a. ◟ p.
29	58.28	27.5	32	25	84.2	NE quad.	10.7	7.3	Ci.-S.	Cu.-N. NE	21.4	● a. p. ◟ p.
30	56.60	26.4	30.1	24.3	90	NE	11.9	8.5	Ci.-S.	Fr.-N. NE	16.7	● a. p. ⊤ ◟ p.
31	53.78	26.9	29.6	24.7	86.5	NE	20.4	9	Ci.-S.	Fr.-N. NE	30.6	● d a. p.
Mean	758.82	26.5	30.8	23.2	84.2	------	8.5	6.5	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	420.5	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.03	27.4	32.4	22.7	79.3	SW	9.8	4.7	Ci.-Cu. W	S. W	------	◟° p.
2	57.84	26	32.4	22	83.8	SW	8.5	8.2	Ci.-S. NE	S.-Cu. W, NW	35.5	◩ ●° p.
3	57.39	25.9	30	22.1	83	SW	8.2	10	Ci.-S.	S.-Cu. SW	13.9	◩ ● a. d² p.
4	58.11	27.1	32.4	22.8	79.5	SW	7.5	8.8	A.-Cu. SW, W	S.-Cu. SW	------	
5	59.02	27.5	33.4	21.5	81	SW	8.3	5.2	Ci.	Cu. SW	------	◩² ◟ p.
6	58.48	28	33.9	23	79.8	SW	7.8	3.7	Ci. NE	Cu. NW	.3	◟² p.
7	58.16	26.5	31.7	23.6	85.7	SW	6.9	8.8	Ci.-S. E	S.-Cu. N	12.2	◩° ● a. p. ◟ p.
8	57.79	26.8	29.2	22.4	81.2	SW	10.8	9.7	Ci.-S.	S.-Cu. SW, W by S	------	
9	58.50	26.2	30.2	23.2	87.2	SW	10.9	10	Ci.-S.	S.-Cu. W	5.2	d° a. ◩ d p.
10	59.26	26	28.5	22.9	87.8	NE, N	------	9.8	Ci.-S.	N., S.-Cu. NE, N	91.1	● a. p.
11	59.98	26.1	26.9	23.3	85.3	NE	18.9	10	Ci.-S.	S.-Cu. NE	9.4	●² d a. ● p.
12	59.93	27.6	29.9	23.9	73.3	NE	19.6	8.3	A.-Cu. NE	S.-Cu. NE	1	●° a. ∪° ☋° p.
13	59.45	26.4	28.9	23	85.2	N quad.	18.4	8.2	Ci.-Cu. NE	S.-Cu. NE	12	●° a. p.
14	60.24	25.4	26.7	23.2	88.2	N quad.	19.4	9.8	A.-Cu. NE	S.-Cu. NE	45.5	●° a. ● p.
15	60.32	25.8	27.4	23.2	87	N quad.	12.4	9.7	Ci.-Cu. NNE	S.-Cu. NE	7.1	● a. p.
16	59.98	25.3	27.4	21.8	89.5	SW, NW	9	8.7	A.-Cu. NE	S.-Cu. NE	36.1	d² a. ●° ☋ p.
17	60.39	26	28.5	23.3	87.5	NE	12.3	9.3	A.-Cu. N	S.-Cu. NE	.5	☋° a. p. d² p.
18	60.80	27.8	30.5	24.3	74.2	NE	22.3	6.3	Ci.-Cu. E	Cu. NE	2.3	☋° ∪ p.
19	60.38	27.8	30.2	24.5	76.3	NE	------	5.2	Ci.	Cu. NE	8.6	● a. ☋° a. p. ◟° p.
20	60.02	27.3	30	23.6	80.8	N quad.	19.8	8.2	A.-Cu. E	S.-Cu. NE	7.7	●° ◠° a. d² ☋² p.
21	59.48	28.1	31.4	24.8	81.3	NE	22.3	8.8	A.-Cu.	S.-Cu. NE	2.8	● a. ◟ p.
22	59.60	27.3	30.3	25.1	84.7	N quad.	16.8	8.8	Ci.-Cu. E	S.-Cu. ENE	------	◩ ● a.
23	59.41	28.2	30.8	25	78.2	NE	18.2	5.2	Ci. E	Cu. NE	------	●° a.
24	59.25	28.1	30	25.9	80.2	NE	20.6	4.3	A.-Cu. NE	S.-Cu, NE, ENE	.5	d² a.
25	59.97	28.5	31.4	25.5	77.3	NE	17.9	3.5	A.-Cu. NE	S.-Cu. NE	3	☋° a. ● p.
26	59.86	27.5	31.5	23.3	80.2	NE	19	5.7	A.-Cu. NE	Variable NE	13.5	d² a. ●° ◟° p.
27	59.39	26.6	28.6	23.2	84.3	NE	21.5	7.5	Ci.-Cu. E	S.-Cu. NE	32.7	☋° a. ●° a. p. ◟° p.
28	59.06	27.6	29.9	24.4	80.2	NE	30.9	8.8	Ci.-Cu. NE	S.-Cu. NE	13.2	↙°° a. p. ◟ ●° p.
29	59.20	26.5	28.2	24.1	87.7	NE	------	10	Ci.	S.-Cu., N. NE	33.8	●° ◩ a. p.
30	58.25	26.6	27.7	23.8	85.7	NE quad.	35.9	9.8	Ci.	N. NE	20.3	↙°° ● a. p.
31	56.02	27.4	28.2	24.5	83.5	N quad.	36.3	9.7	Ci.	S.-Cu. NE	29.7	⊤ a. ◟° p. ↙°° ●°
Mean	759.15	26.9	30	23.5	82.5	------	16.8	7.9	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	437.9	

METEOROLOGICAL DATA, ETC.—Continued.

PARACALE.

[ϕ=14° 17′ N; λ=122° 47′ E; barometer above sea, 5.3 meters; gravity correction not applied, —1.73 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.96	------	------	------	------	S	0.8	3.8	A.-Cu. W	Cu. S, SW	------	☊° a. ☇ p.
2	57.45	------	------	------	------	S quad.	.8	8	Ci.-S.	Cu.	43.4	☊° a. ☇ ● p. ○
3	56.92	------	------	------	------	SE, NW	.8	9.5	Ci.-S.	Variable NW	2	● d a. p ☇ p. ⌐◪
4	58.12	------	------	------	------	SE, SW	.8	7.8	Ci.-S.	Cu. SW	------	○ a. p. ☇ p.
5	59.18	------	------	------	------	SE, NE	.7	1.8	Ci.	Cu. E	------	☊ a. ⌐◪ ☇ p.
6	58.65	------	------	------	------	E quad.	.5	2.3	Ci.	Cu.	------	☊ a. ☇ p.
7	58.05	------	------	------	------	NE, SE	.3	5.5	Ci.-S.	Cu.	------	☊ a. ☇ p.
8	57.44	------	------	------	------	SW	1.3	10	Ci.-S.	S.-Cu.	2.3	●° p.
9	58.20	------	------	------	------	SW	.8	10	Ci.-S.	Cu.-N. SW	5.9	d° a. p. ⌐◪ ☇ p.
10	59.25	------	------	------	------	S quad.	1	9.3	Ci.-S.	Cu.-N. S, E	95.5	● d° p.
11	59.94	------	------	------	------	NE	1.5	10	Ci.-S.	N. NE	121.4	● d° a. p.
12	59.98	------	------	------	------	NE	1.5	8.3	A.-Cu. NE	N., Cu. NE, E	------	d a. ☇ p.
13	59.46	------	------	------	------	NE	1	6.7	Ci. NE	Cu. E	22.9	☊ d° a. ☋ ☇ ● p.
14	60.09	------	------	------	------	NE	1	9.8	----------	Cu.-N. NE	19.1	● d a. p.
15	60.38	25	------	23.5	91	NE, SSE	.3	10	----------	Cu.-N. NE	23.6	● d a. p.
16	60.08	25.6	------	22.7	90	E quad.	.7	7.7	Ci.	Cu. E	21.1	● a. p. d° p.
17	60.52	24.8	------	23.6	92.3	SE	1	9.7	A.-Cu.	N. E	31	d a. p. ● a. ☋ p.
18	61.07	27.7	------	25.5	75.7	NE	1	5.8	Ci., A.-Cu.	Cu. E	------	p° ☋ p.
19	60.62	27.5	------	25.3	78	ENE	1.5	5.8	Ci.	Cu. E	.8	p a.
20	60.08	27	------	24.2	82.1	NE	1.8	7.3	Ci.-Cu.	Cu.-N. ENE	5.3	☋ p p.
21	59.56	27.7	------	25.6	81.5	E quad.	.7	7	Ci., A.-Cu.	Cu., Cu.-N. E	16.5	☋ a. ⌈◪ ● p.
22	59.60	26.8	------	24.3	87.3	E quad.	.5	10	Ci.-S.	Cu.-N. E	14.5	● a. p. ⌐◪ a. p° p.
23	59.58	28.1	------	25.3	80.2	E quad.	1	5.8	Ci.	Cu. E	------	p° a. ☇ p.
24	59.41	28.3	------	27	78.8	E quad.	1.7	4.8	----------	Cu. E	.3	
25	60.09	27.8	------	24.7	81.1	NE	1.3	3.5	A.-Cu.	Cu. E	2.1	p° a. p.
26	60.08	27.7	------	24.7	80.3	NE quad.	1.7	5	----------	Cu. E	15.8	p a. ● p.
27	59.30	27.5	------	25.3	83.5	E quad.	1.7	8	A.-Cu.	Cu.-N. E	3.8	p ● a. p.
28	59.05	28	------	26.5	79	ENE	2.2	7.7	Ci.-S.	Cu. NE	13.2	○ a. p° ●° p.
29	58.91	26.6	------	24.8	89.5	E quad.	1.8	10	Ci.-S.	Cu.-N. E	18.3	● ⌐◪² d° a. ● ☇ p.
30	57.85	26.9	------	24.8	87	NE	1.7	10	Ci.-S.	Cu.-N. NE	49.1	● p a. p.
31	55.67	26.7	------	25.4	88.5	E quad.	2	7.7	Ci.-S.	Cu.-N. NE	46.7	● p a. p. ✓° p.
Mean	759.11	27	------	24.9	83.9	----------	1.1	7.4	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	574.6	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	*°C*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.94	26.5	30.2	24	89	S quad.	1.7	7.3	A.-Cu. W, WNW	Cu., S.-Cu. S quad.	3.3	●° a. p. ☇ p.
2	57.98	26	31.5	23.6	89.3	E quad.	1.2	6.5	A.-Cu. E	Cu.-N. SSW	6.1	☊² ○ a. ● ☇ p.
3	57.22	25.4	27.8	23.5	91.2	S quad.	1.5	10	Ci.-S. NE	N. SW	12.2	● a. ⊕° p.
4	58.16	25.2	28.2	23.2	90.8	SSE	2	9.3	Ci.-S. NE	N. S quad.	9.7	d² ○° a. ⊕° ● p.
5	58.99	27	31.2	23.6	84.3	SSE	1.5	6.7	Ci. NNE	Cu. S, SSW	------	d a. ☇ p.
6	58.48	27.2	32.3	23.5	84.5	S quad.	1.5	6.5	Ci. NE	Cu. NW	------	☊² a. ⊤ ☇ p.
7	58.28	26.7	31.6	23.6	86.1	Variable	1.3	7.3	Ci.-S. NE	Cu. WNW, NW	4.1	☊² ≡ a. ○² ● ⌐◪ p.
8	57.92	26.2	30.7	24	90.8	Variable	.8	8.3	Ci.-S.	N. WNW	3.3	☊² ≡ ○² ● ⊤ ⊕²
9	58.16	25.2	29.7	23	89	SE quad.	1	10	Ci.-S.	N. SW	13.4	⊕° a. ⊕² d ●² p.
10	58.94	25.4	28.7	22.9	87.5	SE, ESE	1.7	9.2	Ci.-S. SE	N. E	------	⊕² ◠° ☇ p.
11	59.76	25.9	29.8	23.4	83.2	ESE	1.5	9.5	A.-Cu. E	Cu., S.-Cu. E quad.	------	⊕° a.
12	59.64	26.8	31	23	80.2	E quad.	1	6.8	A.-Cu. SE	Cu. E	------	☊² ⊕² a. ☋² ☇ p.
13	59.36	25.4	31.6	21.9	87.8	E quad.	1	7.3	Ci.	N. E quad.	2.8	☊ a. ●° ☇ ⊤ p.
14	59.78	26.4	31.2	23	82.8	E quad.	1.3	6.5	Ci.	Cu. E	------	☊² ≡ a. ☋² p.
15	60	26.6	31.2	22.9	82.5	E quad.	1.3	6.8	A.-Cu. NE	Cu. E, ENE	------	☊² ≡ a. ⌐◪ ☋ p.
16	59.76	26.6	31.7	23.2	82.5	NW, NE	1.7	8	Ci.-S. ESE	Variable NE	------	☊² ≡ a. ⌐◪ p.
17	60.07	26.2	30.7	23	82.2	ESE, NNE	1.5	7.3	Ci.-S. SE	Cu. ENE, NE	------	
18	60.70	26.3	31.6	22	75.7	ESE	1.7	5	A.-Cu. NE	Cu. E, ENE	------	☊² ≡ a.
19	60.26	26.3	31.8	21.5	78.8	NE	1.3	5.3	A.-Cu. E	Cu. ENE	------	☊² a. ☋² p.
20	59.86	26.8	32.2	22.5	75.8	SE quad.	1.5	4	A.-Cu. NE, E	Cu. E	------	☋² ☊² a.
21	59.66	26.7	32.2	22	77.7	E quad.	1.5	4.8	A.-Cu. NE	Cu. E, ENE	------	☊² ⊕² a. ☇ p.
22	59.71	26	29.3	22.9	82	NE quad.	1.3	7.8	Ci.-S.	N., S.-Cu. E quad.	------	
23	59.42	26.8	33	21.3	76.8	E quad.	1.7	4.3	A.-Cu. NE	Cu. E, ENE	------	☊ a.
24	59.11	26.9	32.3	21.5	74.6	NW, ESE	2	4.3	A.-Cu. ENE	Cu. ESE	------	☊ a. p.
25	59.79	26.8	32.2	22	74.4	E quad.	1.7	3.5	A.-Cu. NE	Cu. E	------	☊ a. p.
26	59.77	26.8	32.7	22	75.1	NE	1.5	4.2	A.-Cu. NE	S.-Cu. NE, ESE	------	☊ a.
27	59.41	26.7	32.2	22.4	76.2	SE	1.5	5.7	A.-Cu. E	Cu. NE	------	☊ a. ☇ p.
28	59.03	26.6	32.2	22	77.3	NW, ESE	1.3	5.8	Ci. SE	Cu. NE	------	☊ d° a. ☇ p.
29	59.03	26.8	32.6	21.4	74	N quad.	1.5	4.3	Ci. SSE	Cu. NE, ENE	------	☊ a. ☇ p.
30	58.04	27.3	33.5	21.7	74	NE quad.	2.2	4	A.-Cu. NE	Cu. E quad.	------	☊² a.
31	56.15	27.9	33	23.1	71.9	NE	2.5	5.7	Ci. SE	Cu. NE	------	☊ a.
Mean	759.04	26.4	31.3	22.7	81.5	----------	1.5	6.5	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	54.9	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean)	Temperature. Mean.	Maximum.	Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Force (mean).	Clouds. Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.86	26.2	32	24.3	93.8	SE	9.3	9.3	A.-Cu.	S.-Cu. SE	1	d° a. p. ◟° ◩ p.
2	57.81	27.2	32.1	24.5	89.8	Variable	6.8	9.5	A.-Cu.	S.-Cu. SW	6.1	d° p.
3	56.97	26.4	30.8	23.4	91.2	Variable	7.1	9.8	A.-Cu.	S.-Cu., N.	10.4	p a. d² p p.
4	57.92	25.8	29.5	23.9	93.2	SE	11.3	9.8	----------	N. SE, SW	.8	d° a. p.
5	58.77	27.3	33.6	23.7	88.7	SE	8.7	9.5	Ci., A.-Cu.	S.-Cu. SE	1	◟ ⊤ p° p.
6	58.50	27.6	32.5	24.4	87.8	Variable	8.8	9	Ci.-S., A.-Cu.	S.-Cu.	.8	◟° p.
7	58.27	28	31.8	25	88.2	NW	10.5	8.7	Ci., A.-Cu.	S.-Cu. NW	10.2	d ≡ a. ◟ p.
8	57.89	27.1	31.4	24.6	91.5	NW, W	11.6	10	A.-Cu.	S.-Cu., N. NW, WNW	47.6	d ● a. p. ⌒ p.
9	58.01	26.7	30.1	24	89.2	NW quad.	8.7	9.7	A.-Cu.	S.-Cu., N.	2.6	● d° a. p p.
10	58.59	27.1	33.9	23.5	85.7	SE	10.3	9.2	Ci., Ci.-S.	S.-Cu. SE	------	○ a. ◩ p.
11	59.53	26.8	32.7	23.4	85.7	SE	6.7	8.7	Ci.	S.-Cu. SE	------	⊕ p.
12	59.73	27.7	32.7	23.5	83.5	NW	7.1	6.8	Ci.	S.-Cu. SE	------	∪ ⊕ p.
13	59.14	27.1	32.8	23.4	85.5	SE	7.9	7.5	Ci.-S.	Cu., S.-Cu.	------	◟ ⊤ d° p.
14	59.48	27.1	33.4	23.6	85	Variable	9.2	8.2	A.-Cu., Ci.-S.	Cu., S.-Cu.	.5	◝ ◩ d° p.
15	59.94	27	33.3	23.1	86.5	NW	8.8	8.2	Ci., Ci.-S.	Cu., S.-Cu.	16.5	◝ ◩ p p.
16	59.70	27.1	32.2	23.3	87.7	Variable	7.2	7.7	Variable.	S.-Cu.	3	◟° ⊤° p ⊕ p.
17	59.78	27.2	33.2	23.9	85.1	SE quad.	7.6	7.3	A.-Cu.	S.-Cu. SE	4.6	⌒ p ◟ ◩ p.
18	60.30	27.4	34.1	23.1	82.7	SE quad.	8.6	6	Ci.-S.	Cu., S.-Cu.	------	
19	60.15	27.4	34	22.4	80	Variable	7	2.5	----------	Cu., S.-Cu.	------	
20	59.79	27.8	33.3	23.3	79.5	Variable	7.9	3.2	----------	Cu., S.-Cu.	------	
21	59.45	28	34.4	22.8	77.7	Variable	7	3.2	A.-Cu.	Cu.	------	◩° ⊕° p.
22	59.70	27.7	33.8	23.4	78.4	SE	6.3	4.5	Variable.	S.-Cu. E	------	⊕ p.
23	59.29	28.1	35.1	23	78.8	N	9	3	Ci.	Cu., S.-Cu.	------	
24	58.86	28.2	35.5	23	78	S	8.1	2.3	Ci.	Cu., S.-Cu.	------	
25	59.66	28	34.6	22.8	78.8	SE, SW	7.7	.8	----------	Cu., S.-Cu.	------	
26	59.61	27.6	34.3	23.1	80.1	SE, S	7.6	3	----------	S.-Cu. SE	------	d° p.
27	59.27	28.2	33.8	24	79	Variable	9.2	3.7	Ci.	S.-Cu. E	------	◟° p.
28	58.85	28	35.2	23.4	78.9	S quad.	9.1	3.8	Ci., Ci.-S.	Cu., S.-Cu.	------	◟ p.
29	58.81	27.6	34.5	22.6	79.7	SE, N	8.3	2.3	Ci.	Cu., S.-Cu.	------	
30	57.99	27.6	33.3	23	79.5	Variable	7.7	1.3	Ci.	Cu., S.-Cu.	------	
31	56.17	27.9	34.4	23.2	83.2	Variable	6.7	2.7	Ci.	Cu., S.-Cu.	------	
Mean	758.90	27.4	33.2	23.5	84.3	----------	8.3	6.2	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	105.1	

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.67 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.29	26.1	31.1	23.9	93.3	SSE	2.2	10	Ci.-S.	Cu.-N.	1.4	p a. ◟ p.
2	57.63	26.2	31	23.4	90.2	S quad.	1.8	10	A.-Cu.	Cu. SW	20.6	●² a. ●° p.
3	56.76	26.1	29.4	23.4	89.7	SSE	1.2	10	Ci.-S.	S.-Cu., Cu.	2	●° a. p.
4	57.37	25.3	27.9	23.9	91.5	S quad.	2.7	10	Ci.-S.	N.-cf.	2.8	d ●° a. p.
5	58.42	26.6	30.9	23.5	87.5	S	3.2	9.8	Ci.-S.	Cu.	------	◩ p.
6	58.37	27.2	31	23.4	85.5	SSE	2	10	Ci.-S.	Cu. SSW, SW	------	⌓ ≡° a. ◟ p.
7	58.22	27.5	31.5	24.4	86	NW	1.5	9.7	Ci.-S.	Cu. NW	2.3	⌓ a.
8	57.80	27.6	31.4	24.6	85.7	NW quad.	1.7	9.8	Ci.-S.	Cu. NW	31.2	p a. ● a. p.
9	57.86	26.4	30	24	89.2	W	1	10	Ci.-S.	Cu.	------	● a. ○° a. p.
10	58.26	26.8	32	24.2	88.2	S quad.	1.8	9.7	Ci.-S.	Cu. SSE	41.4	d ●² ◩ p.
11	59.30	26	30.5	23.4	88.8	Variable	1.8	9.3	Ci.-S.	S.-Cu.	2.3	⌓ ≡° ●° a. ⌒ d° p.
12	59.47	26.6	31	22.6	84.3	SE quad.	1.7	8.2	Ci.	S.-Cu.	------	⌓ ≡° a.
13	59.02	26.2	30.4	22.4	86.7	N quad.	1.7	7.3	Ci.-S.	Cu.	9.4	⌓ ≡° ● a. ◩ ⊕° p.
14	59.29	26.1	32.2	22.8	86.1	SSE	1.5	9.5	Ci.-S.	S.-Cu.	2.3	⌓ ≡° a. ◩ ●° ◟ p.
15	59.60	27.1	32.5	23.7	85.2	SE quad.	2.3	9.7	Ci.-S.	S.-Cu., Cu.-N.	------	●° a. ◩ p.
16	59.52	26.6	30.6	23.7	85.5	S	1.8	6.2	Ci.-S., Ci.	Cu.	------	
17	59.59	27	32.6	22.6	86.3	SE quad.	1.7	5.2	Ci.-S., Ci. ·	Cu.	.3	d² p.
18	60.13	27.4	32.9	23.5	81	SSE	1.8	6	A.-Cu., Ci.-S.	S.-Cu.	------	◩ ⊕° p.
19	59.91	27.4	32.9	22.4	79.8	SSE, NNE	2.3	4.3	Ci.-S.	Cu.	------	⌓² ≡ a. ∪° a. p.
20	59.56	27.5	32.1	23	79.7	Variable	2.7	3.8	Ci., Ci.-S.	S.-Cu.	------	⌓ ≡° a.
21	59.34	28	33.1	24.1	79.2	Variable	2.7	4.2	A.-Cu., Ci.-S.	Cu.	------	◩ p.
22	59.40	27.1	31.9	23	83.2	NE quad.	1.8	6.7	Ci.-S.	Cu.	------	⌓ ≡° a.
23	59.10	27.4	33.7	21.6	79.8	SE quad.	2	2	Ci.-S.	S.-Cu., Cu.	------	⌓² ≡ a.
24	58.68	28	33.4	23.6	80	SE quad.	1.8	3.7	Ci., Ci.-S.	Cu.	------	
25	59.42	27.3	33.8	23.1	80.3	SSE, NW	2.2	1.7	Ci.-S.	S.-Cu.	------	⌓ ≡° a.
26	59.40	27.7	33.8	22.9	82.2	SE quad.	2.3	4.3	Ci.-S.	S.-Cu., Cu.	------	d ◟ p.
27	59.10	27.7	33.6	23	78.5	NE quad.	2.3	7	Ci.-S.	S.-Cu., Cu.	------	⌓ ≡° a. ◟ p.
28	58.58	27.5	33.6	22.8	79.7	Variable	2	8	Ci.-S.	Cu.	------	⌓ ≡° a.
29	58.68	27	32.5	22.2	80.5	SE quad.	2	4.3	Ci.-S.	S.-Cu., Cu.	------	⌓² ≡ a.
30	57.95	27	32	22.5	81	N quad.	2	2.3	Ci.-S.	S.-Cu.	------	⌓ ≡° a.
31	56.10	27.8	32	23.1	81.7	N quad.	2.5	5.2	Ci.-S.	S.-Cu.	------	⌓ ≡° a.
Mean	758.68	27	31.8	23.2	84.4	----------	2	7	----------	----------	------	
Total	------	------	------	------	------	----------	----------	----------	----------	----------	116	

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.[1]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Perct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	635.82	17.8	22.2	16.5	96.2	SW quad.	11.6	9.6	Variable	Fr.-N. S, SW	34.8	☇° ●² p. ●° a. p.
2	36.01	18	23.2	16.2	97.3	W	11.9	9.9	Ci.-Cu., Ci.-S.	N. SSW	58.2	⌐⌇°●²p.≡² d a.p.
3	35.05	18	21.2	16	96.7	Variable	8.9	10	A.-S.	Cu.	14.2	●≡ a. p. d° p.
4	35.52	17.3	19.6	16.5	96	SE quad.	9.8	10	A.-S.	Fr.-N. SE	1.8	≡ d² a. p. ●° p.
5	36.81	18.4	23.2	15.5	92.5	SW quad.	8.9	9.7	Ci.-S., Ci.-Cu. ENE	Fr.-N., Cu. SW	.5	♎ a. ≡ p.
6	36.71	18.4	23.5	16.5	94	E quad.	11.7	9.6	Ci.-S.	Fr.-Cu. S	1.5	♎ a. ≡² ⌐⌇●° p.
7	36.48	18	23.8	15.9	94.2	NW quad.	11.7	9.7	Ci.-S.	Fr.-Cu. NNW	.5	♎² a.≡°⌇ ⌐ p. ●°
8	35.85	17.1	19.3	16	98.5	NW quad.	20.7	10	Ci.-S.	S.-Cu. NW	39.4	● ≡ a. p.
9	35.95	17.4	21.7	14.6	94.7	W	13.8	10	Ci.-S.	S.-Cu. NW	1.3	●° a. p. ⊕ d p.
10	36.39	17.8	21.8	15.4	93.8	E, W	8.9	9.6	Ci.-S.	Cu.	5.3	♎² ◯° a ≡● p. d
11	37	17.2	21.2	15.5	96	NE, WSW	8.2	9.9	Ci.-S.	Cu. NbyE	4.1	♎² a. p ●° p. ≡
12	37.28	17.7	22.3	15.2	93.6	W quad.	9.3	8.7	Ci.-S., Ci.	N. NNE	.8	♎ a. p≡² d² ⌐⌇ p.
13	36.94	16.8	20.9	14.8	94.3	E	9.5	8.7	Ci.-Cu. NWbyW	Cu.	.5	♎ a.≡² ⌐◠°●°p.
14	37.18	17.4	21.4	15	94.7	E quad.	7.7	8.9	A.-Cu. W	N. SE	1	♎ a.≡² p° d ⌐ p.
15	37.50	17.9	21.4	15.5	92.2	W	7.3	9.1	Variable	S.-Cu. NW	6.1	♎ a. ⌐⌇ p²● p. d°
16	37.36	17.4	21.7	15.8	95.8	E quad.	9.2	8.7	A.-Cu.	Cu., Cu.-N.	.5	♎ a. p° ⌐ d p. ≡²
17	37.52	18	23.7	15.4	92	Variable	9.3	7.1	Ci.	Cu.	29.2	♎ a. ≡° ● p.
18	38.02	17.5	22.3	14.7	89.5	SE quad.	9.3	6.7	A.-Cu.	Cu.-N.	20.3	♎² a. ≡° ●² p.
19	37.84	18.4	22.4	15.1	86.7	SW quad.	9	5.3	Ci.	Cu.	6.1	♎² a. ● ≡ p.
20	37.59	18.2	22.6	15.4	88.5	Variable	9.5	7.3	----------	S.-cf. N	.3	♎² a. ≡² d° p.
21	37.47	18.2	24.9	14.5	81.2	E quad.	12	4.6	Ci.	Cu.	------	♎² a. ≡² p.
22	37.60	19.1	24.7	15.1	77	E	15.2	6.7	A.-Cu.	Cu.	------	◯° ◠° ≡² p.
23	37.48	19.2	23.7	15.5	80.5	E, W	10.3	5.4	Ci.	Cu. NE	1	♎ a. ≡ ⌐° ●° ◠ p.
24	37.08	18.7	23.2	15.7	83.3	E	11.8	5	Ci.	Cu.	------	♎ a. ≡ p.
25	37.60	18.6	24	15	80.8	E quad.	10.6	4.6	Ci.	S.-Cu. E	------	♎² a. ≡ p.
26	37.54	17.8	22	14.9	92.2	E, SE	8.3	7	Ci.	S.-Cu. E	.5	♎² a. ≡° a. p.
27	37.28	18.8	24.3	16	90.3	NE, WSW	8.2	7.6	Variable	S.-Cu. ENE	------	●° a. ≡ p° p.
28	36.99	18.3	24.2	15.5	88	NE quad.	10.2	7.1	Ci.	S.-Cu. E	------	♎² a. ≡² p.
29	37	18.8	24.2	16	75.7	E quad.	12.5	8	Ci.-S., Ci.	Cu.	------	≡° p.
30	36.48	19.3	24.8	15.5	85.2	SW quad.	8.9	5.1	Ci.	Cu., S.-Cu.	------	♎ a. ≡ p.
31	35.12	19.3	23.7	15.9	81.5	SE quad.	8.3	6.1	Ci.	S.-Cu. NE, E	------	≡² p.
Mean	636.85	18.1	22.7	15.5	90.1	----------	10.4	7.9	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	227.9	

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.48	27.3	31.1	24.6	82.4	S quad.	1.2	8.8	Ci.-S.	Cu.-N. SSW, SbyW	2.3	d ● p.
2	58.04	27	31.2	23.6	85	SE quad.	.8	9	Ci.-S.	N.	8.6	d a. p. ● p.
3	56.96	24.5	25.7	23.1	94.2	E quad.	.7	8.5	Ci.-S.	Cu.-N., N.	4.6	d a. p.
4	57.72	24.6	26.9	22.9	92.4	Variable	.7	8.7	Ci.-S.	Cu.-N., N.	4.6	d a. p. ●° p.
5	58.68	26.7	30.6	23.4	83	S quad.	1	5	Ci.-S.	Cu.-N., Cu.	------	⌇ p.
6	58.71	27.3	32.5	24.5	84.3	S quad.	.7	7.7	Ci.-S.	Cu.-N. SSW	.3	d p.
7	58.55	27.4	32	23.6	83.7	Variable	.8	3.8	Ci.-S.	Cu., Cu.-N.	------	d p.
8	57.96	26.4	31.1	23.5	89	Variable	.8	6.7	Ci.-S.	Cu.-N.	62	♎ d ●° a. ●² p.
9	58.14	25.4	29.5	21.9	85.3	Variable	1.2	8.7	Ci.-S.	N., S.-Cu.	------	● a. d° p.
10	58.62	26.5	31.3	23.1	80.8	Variable	1	3.8	Ci.-S.	S.-Cu.	------	♉ p.
11	59.85	26.1	31.8	23.9	77.6	NNW	1.2	6.3	Ci.-S.	S.-Cu.	------	♉ p.
12	59.76	26.6	32	22.4	76.9	N quad.	.7	2.8	Ci., A.-Cu.	Cu.	------	♉ p.
13	59.28	26.3	32	22.4	79.1	N quad.	1	.3	Ci.-S., A.-Cu.	S.-Cu.	------	
14	59.74	26.4	31.3	22.4	73.5	Variable	.8	3.2	Ci.-S., A.-Cu.	S.-Cu.	------	
15	59.85	27.2	31.9	24.3	73.8	Variable	.8	5.2	A.-Cu. S	S.-Cu.	------	♉ p.
16	59.77	27.4	31.8	24.5	74.8	Variable	1	3.3	A.-Cu.	S.-Cu., Cu.	------	
17	59.91	27.1	32.1	23.7	77.7	Variable	.8	1.5	A.-Cu.	Cu.	------	
18	60.49	27.3	32.4	23.9	79.2	Variable	1	.2	Ci.-S., A.-Cu.	Cu.	------	♉ p.
19	60.20	27	32.1	23.1	82.2	Variable	1	.3	Ci.-S., Ci.	Cu. ESE	------	⌇° p.
20	59.86	26.9	32.5	23.4	78	Variable	1	.2	A.-Cu., Ci.	Cu.	------	
21	59.71	27	32.2	23	74.4	NNW	1	.2	Ci.	Cu.	------	
22	59.47	27.4	32.4	22.9	76.3	SE quad.	.8	1.7	Ci.-S.	Cu.	------	
23	59.54	27.6	32.7	23.5	76.5	Variable	1.2	1.5	Ci., A.-Cu.	Cu.-N. N	------	d° p.
24	58.96	27.4	32.3	23.1	76.5	Variable	1.2	.3	Ci., A.-Cu.	Cu.	------	♎ a.
25	59.74	27.7	32.3	24	75.2	Variable	.8	.2	Ci.-S.	Cu.	------	
26	59.58	28.2	33	24	71.3	N quad.	.7	3.7	A.-Cu., Ci.-S.	Cu., S.-Cu.	------	≡ a.
27	59.30	28.4	32.9	24.5	66.3	N quad.	1	.2	A.-Cu., Ci.-S.	Cu., S.-Cu.	------	
28	58.98	27.2	32.4	22.8	73.2	N quad.	1	0	Ci.-S., Ci.	S.-Cu., Cu.	------	♎ a.
29	58.85	28.1	33	22.4	63.2	Variable	1	.2	Ci.-S., A.-Cu.	S.-Cu., Cu.	------	
30	58.15	28.8	33.3	23.3	61.5	N quad.	1.3	0	Ci., A.-Cu.	Cu.	------	
31	56.56	27.7	32.4	24.7	71.3	N quad.	2.2	.3	Ci.-S.	S.-Cu.	------	
Mean	758.98	27	31.6	23.4	78	----------	1	3.3	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	82.4	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.28	28.1	35.5	24	82.2	NW	0.8	7.5	Ci.-S.	Cu. E, S	9.7	☊²≡° ◯° a. ● ⌐◹ p.
2	57.80	26.5	33.7	22.2	89	SE	.5	8.3	Ci.-S.	Cu., N. E, NE	6.4	◯° a. ● a. p.
3	57.09	25.4	28.4	23	92.4	NW	.5	8.5	----------	Cu.-N., N.	25	● a. p.
4	57.69	25.5	28.5	23.1	93.3	SW	.2	8.8	Ci.-S	N.	5.3	● a.
5	58.56	27.9	35	23.6	83.3	SE, NW	1.2	6.7	Ci.-S.	Cu. S	------	☊ ≡ a. ◯° d ≲ p.
6	58.66	27.7	33.5	24.5	87.5	NW	.5	8.7	Ci.-S.	Cu.-N. ESE	------	⌐◹ d ≲ p.
7	58.27	27.4	33.1	22.7	83.3	SE, NW	1	6.8	A.-Cu.	Cu.-N., Cu. NW, E	2.3	☊ a. ● p.
8	57.30	25.4	32.3	23.2	89.4	NE	.7	9	A.-S.	Cu.-N. N	27.2	☊² ≡° a. ●² p.
9	58.26	24.4	29.3	22.1	91.7	NW	.2	9.7	----------	Cu.-N.	3	● a. p. d p.
10	59.38	25.8	30.9	22.7	83.7	N quad.	1.3	7	Ci.	Cu. NW, N	------	☊ ◯² a. ◯° p.
11	60.59	25	30.7	20.4	79.5	NW	.8	7.2	Ci.-S.	S.-Cu. W	------	☊ a.
12	60.88	24.7	30.6	21	83	NW	1.5	7.3	Ci.	Cu.-N. N	------	≡° a. d p.
13	60.72	24.2	29.6	22	85.2	NW	2.3	7.7	Ci., A.-Cu.	Cu., Cu.-N. NW	------	☊° d a.
14	61.06	24.4	29.6	20.6	85	NW	.8	8.5	A.-Cu.	S.-Cu. W	------	☊ a.
15	60.66	26.6	31.9	22	77.5	NW	.5	8.2	----------	S.-Cu.	------	☊ a.
16	60.59	25.7	30 9	22.4	85.3	NW	.7	7.3	----------	S.-Cu., Cu. W	------	☊ a ☋ p.
17	61.04	25.3	30.5	21.5	83.9	NW	.5	7	Ci.	Cu. N	------	☊ a.
18	61.61	25.8	32.3	20.5	85.3	SE, NE	.3	5.2	Ci.-S.	Cu. E	------	☊² a.
19	61.03	26.4	32.4	22.9	84.3	NE	.3	7.2	A.-Cu.	Cu. NE	------	☊ a.
20	60.62	26.2	33.7	21	80.3	NW, NE	.3	3.3	Ci.	Fr.-Cu. SE, N	------	☊² ≡ a.
21	60.74	26.2	33.9	20	80.2	NE	.3	3.2	A.-Cu.	S.-Cu. NE	------	☊² ≡ a.
22	60.95	24.3	29.1	21.4	90.8	SW	.3	7	Ci.	Cu.-N. SW	------	☊² a. d° p.
23	60.47	26.3	33.4	22	86	SE	.7	5.3	Ci.	S.-Cu. E, S	------	☊² ≡ a.
24	59.86	27	34.4	21.4	79.5	NE	.5	5	----------	Cu. N	------	☊² ≡ a.
25	60.70	26.3	32.7	21.9	82.3	NE, NW	.3	5	----------	Cu. NW	------	☊ a.
26	61.40	24.8	28.4	22.6	85.7	NE	1.3	7.7	----------	Cu.-N. NW	1.5	☊² ≡° ● a.
27	60.74	25.8	31.5	21.3	80.5	N quad.	1	5.2	A.-Cu.	Cu. NW	------	☊ a.
28	60.40	25.7	32.2	21.5	81.8	NW	.7	4.8	----------	Cu. ESE, NW	------	☊² a.
29	60.81	24.3	28.9	20	90.8	NW	1	6.2	Ci.	Cu.-N. E	------	☊ a.
30	59.86	26.4	33.6	21.5	81.2	NE	1.3	8.2	A.-Cu.	Cu.-N. NE	9.4	☊² a. ● p.
31	58.08	26	31.1	23.1	89.1	NE	1.5	7.3	----------	Cu.-N. E	5	● a. d p.
Mean	759.78	25.9	31.7	22	84.9	----------	.8	6.9	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	94.8	

APARRI.

[ϕ=18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.38	26.8	31.9	22.8	84.2	Variable	8.3	9	Ci.-S. E	S.-Cu., Cu-N.	8.9	≡ ◯ a. ⊤ ⌐◹ ● p.
2	57.84	26.5	30	23.3	85.2	N, S	14.3	10	Ci.-S.	S.-Cu. S	38.1	◯ a. ⊤ a. p.
3	57.31	24.5	27.1	22.1	93.2	W quad.	12	10	----------	S.-Cu., N. ENE, N	99.6	⊤ ●² a. ● p.
4	57.88	24.7	27	22.6	93.8	S quad.	3	8.8	Ci.-S.	S.-Cu., N.	14	≲ ● ⌐◹° a. ≲ p.
5	58.88	27	30.5	23.1	84.2	Variable	7.3	7.2	Ci. SE, E	Cu.-N. NE	1	● ≲ p.
6	58.96	27.2	31.7	24.1	85.4	Variable	6.5	7.7	Ci.	Cu.-N. Variable	------	◯ a. ≲ ⊤° p.
7	58.36	27	30.7	23.6	85.7	S, NW	13.8	6.8	Ci., A.-Cu. E, N	Cu.-N. NW	7.9	≲ ≡ a. ● ≲ p.
8	57.40	25.7	28.9	23.2	86.2	NW, W	16.7	9.7	A.-Cu. NW	cu.-N., s-cu. NW, N	22.6	● ◠ a. ⊤ ● p.
9	58.34	25.9	29.6	22.4	80.6	SW, N	9.5	8.8	Ci.-S.	S.-Cu. N	1.3	● a.
10	60.12	26.2	29.7	23.5	72.8	NE	14.3	7.5	Ci. E	Cu.-N. NE	------	
11	61.20	25.7	29.5	22.2	71.7	NE	12.6	7.7	Ci., Ci.-S.	Cu.-N., S.-Cu. NE	.5	●° a.
12	61.44	24.7	27.4	22	80.7	NE	15	7	Ci.-S.	Cu.-N., S.-Cu. NE	6.6	☊ a. ● a. p.
13	61.30	25.8	29.5	24.1	66.8	NE	19.8	10	----------	S.-Cu. NE	------	
14	61.51	24	28	21.6	82.5	Variable	7.5	10	----------	S.-Cu. NE	1.8	
15	61.26	25	29	22.1	78.5	W, NE	10.4	10	----------	S.-Cu. NE	------	● a.
16	61.12	26.2	29.5	22.8	69.1	NE	11.8	7.5	A.-Cu. SW	S.-Cu. NE	------	
17	61.69	26.2	29.7	23.6	69.4	NE	15.5	4.8	----------	Cu.-N. E, NE	------	
18	62.09	26.3	29.7	23	72	E, NE	13.9	6.5	A.-Cu. E	S.-Cu. NE	------	
19	61.49	26.6	30.5	23.1	73.8	E, NE	12.6	2.5	A.-Cu.	S.-Cu., Cu.-N.	------	
20	61.10	26.4	31	22.6	76.3	E, NE	9.6	0	----------	----------	------	☊ a.
21	61.04	26.4	31	22.3	80.3	E quad.	10.6	3	A.-Cu. SE	S.-Cu. SE	------	☊ a.
22	61.09	25.4	27.5	23.6	89.7	E	5.1	4.8	----------	S.-Cu. SE, E	.3	☊ ● a.
23	60.74	26.1	32	22.1	84.1	S, NE	11.1	2.7	A.-Cu. E	S.-Cu. SE	------	☊ a.
24	60.45	26.8	30.5	23.1	81.5	NE	----------	1	----------	S.-Cu. NE	------	☊ a.
25	61.36	26.3	30.7	23.5	81.2	NE	11.6	6.2	A.-Cu. E	S.-Cu. E	17.5	● p.
26	61.99	25.6	29	22.9	79.3	NE	16	7	----------	S.-Cu., Cu.-N. NE	7.1	● a.
27	61.42	25.4	28.5	22.6	79.2	NE	11.4	10	----------	S.-Cu., Cu.-N. NE	------	● a.
28	61	26.8	30	24.6	71.7	NE	13.6	4.7	A.-Cu. E	S.-Cu. NE, E	------	
29	61.32	25.6	28.9	22.6	85.5	NE	12.4	4.3	A.-Cu. SE	Cu.-N. E	25.6	☊ a. ● a. p.
30	60.60	26.9	30.4	23.1	83.7	NE	13.7	3	----------	Cu.-N. NE	10.4	● a.
31	59.06	25.8	29.3	23.6	90.7	NE	23.3	8.2	----------	Cu.-N. NE	22.6	● a. p.
Mean	760.22	26	29.6	23	80.6	----------	12.1	6.7	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	285.8	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[ϕ=6° 03′ N; λ=121° 00′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	22.1	96	70	6	10	------	☊° a.
2	31.2	21	96	98	6	10	23.4	☊ ≡° a. ● p.
3	30.6	21.1	96	77	8	8	------	d p.
4	32.3	20.9	98	72	7	8	------	☊ ≡° a. d p.
5	32.3	21	94	73	6	8	------	☊° a.
6	32.8	20.1	95	72	8	8	6.1	☊° ●° a. ☇² p.
7	30.2	20	97	81	8	8	37.1	☊° a. ●² p.
8	32.4	21.5	96	74	9	6	------	☊ ≡° a.
9	31.6	21.1	96	77	8	8	------	☊ ≡° a.
10	31.1	21.6	95	73	5	10	9.9	≡° a. ☈ ●° p.
11	31.4	21.2	97	78	8	8	4.1	≡° a. ●° p.
12	32.6	21.1	98	76	6	8	5.1	☊ ≡° a. ●° p.
13	30.2	22.2	96	84	6	10	.3	≡° d a. ●° p.
14	31.4	21.2	80	68	8	8	------	☊ p a.
15	32.4	21.6	93	85	6	8	------	☊° a. p p.
16	31.2	21.5	89	81	8	8	------	☊° a.
17	32.2	21.3	97	75	7	8	------	☊° ≡° a.
18	31.1	21	95	91	8	8	36.6	d ●² ○² ☋° p.
19	32.5	20.3	95	64	5	8	------	☊ a. ○² ◡² p.
20	31.5	20.5	96	75	4	10	32	●² p.
21	31.5	20.3	92	85	9	8	------	☊ a. ☇² p.
22	31.7	21	94	72	8	8	------	☊ a. d ☈ p.
23	31.1	21.1	95	79	8	10	------	≡° a. ☇² p.
24	31.1	21.5	96	87	10	10	97	☈² ●² a. p.
25	30.3	19.8	95	76	8	8	39.9	●² a. ● p.
26	32.6	19.5	96	72	6	8	------	☊² a.
27	32	21.4	96	80	6	10	------	≡° a. p p.
28	32.1	21.8	95	72	8	8	------	☈ p.
29	32.9	21.8	81	75	5	10	------	
30	32.3	22.2	98	76	8	10	------	
31	32.5	22.1	96	79	8	10	11.7	● ○² a. ⊤° p.
Mean	31.7	21.1	94.5	77.3	7.1	8.6	------	
Total	------	------	------	------	------	------	303.2	

ISABELA, BASILAN.

[ϕ=6° 42′ N; λ=121° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.3	22.5	96	91	10	10	5.3	⊤ ●° p.
2	31.3	22.5	91	77	10	10	1	●° a. p° ⊤ p.
3	27.6	22.4	96	96	10	10	.8	●° a. p.
4	29.9	20.5	96	81	9	10	------	☊ a. p° p.
5	29.8	21.5	97	75	1	4	------	☊ a.
6	30.3	23	96	81	9	9	4.3	☊ a. ◠ p.
7	30.8	23	96	83	10	10	13.2	● ⊤ a. ☈ p.
8	30.3	22	96	81	10	6	------	☊ a.
9	30.3	22	96	81	9	10	------	☊ a. ⊤ a. p.
10	30.5	21.8	96	90	4	10	14.3	☊ ● a. p p.
11	29.9	22.3	96	88	10	10	2.8	☊ ●° a. p p.
12	28.8	22	96	82	10	10	------	☊ a. p° p.
13	29.8	22.3	96	96	1	10	2	☊ a. ●° p.
14	31.3	22	95	81	10	10	2.3	☊ a. ●° ☋ ☇ p.
15	31.1	22	96	78	10	10	25.6	☊ a. d ● ⊤ p.
16	30.8	22.4	96	80	9	4	------	☊ a.
17	31.8	22.5	96	88	3	10	.5	☊ a. ●° p.
18	29.3	22.5	96	81	10	4	.8	☊ ●° a.
19	30.3	22	96	75	1	7	------	☊ a.
20	33.8	21	96	75	1	5	------	☊ a.
21	30.6	22	97	84	10	10	1.3	p° a. ●° ⊤ p.
22	30.2	22	96	77	9	10	------	☊ a. ⊤ p.
23	31.3	22.3	96	85	9	9	------	☊ a. ⊤ p.
24	30.3	22.7	96	92	10	10	20.6	p° ⊤ a. ●² p.
25	28.5	23	96	94	10	9	25.1	d ●² a. ● p.
26	31.3	22	97	83	9	8	------	☊ a.
27	31.8	21.7	96	89	10	10	17	☊ a. ● a. p.
28	32.8	22	96	79	1	5	------	☊ a.
29	30.8	22	96	79	2	10	58.4	☊ ● a. ☈ ● p.
30	30.8	21.9	95	81	2	6	------	☊ a.
31	29.8	23.5	97	81	10	8	20.3	☊ a. ● ☇ ⊤ p.
Mean	30.6	22.2	95.9	83.4	7.4	8.5	------	
Total	------	------	------	------	------	------	215.6	

ZAMBOANGA.

[ϕ=6° 54′ N; λ=122° 05′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.5	23.5	84	76	8	9	------	☈ d p.
2	30.1	22.6	96	73	10	10	37.3	☈ ● p.
3	28.5	22.4	91	78	10	10	------	
4	31.8	22.3	90	74	5	9	------	
5	30.3	22	91	66	2	6	------	☊° a.
6	29.7	22.5	87	84	3	7	3.1	p a. ●° d p.
7	29	23.5	93	73	10	10	1.5	☈ d p a.
8	28.8	23.6	89	76	10	9	------	○ p.
9	29.7	23.1	91	74	10	9	------	☊ a. ☈ p.
10	30.2	22.9	88	81	5	8	1	p p.
11	29.1	22.9	89	76	10	10	.8	d p a.
12	28.1	22.2	92	88	9	10	------	
13	30	23	91	83	4	7	------	☈ p.
14	31	23.4	94	64	9	8	------	
15	30.9	23.5	90	74	9	9	8.4	● p.
16	30.9	23.1	88	75	10	4	2	☇ p.
17	30.9	23	96	64	9	8	.3	● a. p p.
18	29.7	23	82	71	9	6	.5	●° a.
19	31.7	22.5	88	76	3	6	------	
20	30	22.5	86	68	3	8	2.3	☊° a.
21	29.9	23	95	76	10	9	1.8	● a. ☈ p.
22	29.6	23.1	90	78	10	10	------	d a.
23	30.1	23	90	68	8	9	3.6	☈ p.
24	30.6	23.1	93	78	10	10	27.7	● a. p.
25	29.4	22.1	94	78	10	5	5.1	● a.
26	31.6	22.4	88	58	6	3	------	☊° a.
27	27.8	23.7	86	81	10	10	------	
28	30	22.5	91	77	2	10	------	☊° a. ☈ d p.
29	30.4	23.5	88	91	9	10	26.4	● ☇ p.
30	29	22.9	91	77	5	10	1.3	●° p.
31	29.1	23	87	80	10	9	14.5	d ☇ p.
Mean	29.9	22.9	90	75.2	7.7	8.3	------	
Total	------	------	------	------	------	------	137.6	

DAVAO.

[ϕ=7° 01′ N; λ=125° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	21.1	96	70	5	5	------	
2	28.2	21.7	96	80	9	10	------	
3	30.7	21.3	98	72	5	6	------	
4	31.7	21.6	96	71	5	6	------	
5	31.8	22.1	98	71	5	6	------	
6	30	22.3	94	75	5	8	------	
7	31.8	22.2	96	63	5	5	------	
8	31.9	22.5	96	69	6	5	------	
9	31.6	21.9	95	67	5	6	7.9	● ⊤ p.
10	31	21.5	97	70	5	7	15.7	● p.
11	30.7	21.9	96	68	5	5	------	
12	31	22	96	68	6	5	24.4	● p.
13	31.2	21.1	96	70	5	7	6.1	● p.
14	30.8	22.1	98	65	5	7	------	d p.
15	26.2	20.2	95	87	8	9	------	
16	31.9	20.1	98	68	6	5	------	
17	32.2	22.1	96	68	7	6	------	
18	31.2	22	96	67	5	6	------	
19	32.1	21.2	92	61	6	6	------	
20	32.3	22.5	96	67	5	6	26.7	● p.
21	31.4	21.9	97	70	5	6	16	● p.
22	31.5	22.3	97	68	7	6	24.6	● ⊤ p.
23	31.7	22.2	96	71	7	6	------	
24	31.6	21.7	96	66	5	6	18	● ☇ p.
25	31.2	22.2	97	63	5	5	------	
26	33.1	21.8	96	65	6	5	26.7	● ☈² p.
27	32.1	22.1	96	68	6	5	17	● p.
28	31.8	22.2	96	65	6	5	------	
29	31.7	23	98	70	5	6	13.5	●² p.
30	29.9	22.1	98	71	5	6	10.7	● p.
31	31.2	21.5	87	68	5	8	15.2	● p.
Mean	31.2	21.8	96	69.1	5.6	6.1	------	
Total	------	------	------	------	------	------	222.5	

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[ϕ=7° 13′ N; λ=124° 15′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.6	23.5	96	73	4	10	2	☽ ☾ p.
2	28.3	22.9	96	74	10	10	------	≡ ☊² a.
3	30.3	23.1	96	73	7	10	.5	≡ ☊ a. ☽ p.
4	32.5	22.7	94	61	5	4	------	☊² a.
5	31.9	23	94	65	1	3	------	☊ a. ☾ p.
6	32	24	95	66	4	9	41.7	☊ a. ☾ ●² p.
7	30.5	23.4	95	74	8	10	------	☊ ≡ a. ⊤ p.
8	30.3	23	93	69	5	7	------	☊ ☌ a.
9	30.6	22.4	96	69	10	10	------	☊ a.
10	31.4	23.3	95	66	7	4	------	≡ ☊ a. ☾ p.
11	30.2	22.9	95	74	5	10	18.8	☊ a. ● p.
12	30.8	22.3	97	72	10	8	.3	≡ ☊ a. ☌ p.
13	31.1	22.9	92	68	3	6	16	☊ a. ☾ ● p.
14	31.6	23	95	61	3	4	3.3	≡ ☊ a. ☾ ● p.
15	30.3	23.8	96	74	8	10	------	☽² ☋ p.
16	31.8	22.9	96	62	10	5	5.1	☊ a. ● p.
17	31.8	23	96	72	10	9	------	≡ ☊ a. ⊤ p.
18	30.4	24	96	75	7	4	.8	≡ ☊ a. ☾ p.
19	32.2	22.9	94	65	4	4	------	☊ a.
20	32.6	24	95	78	3	6	10.7	≡ ☊ a. ☾ ● p.
21	31.3	22.8	97	78	10	4	1.3	☊ a. ☽ p
22	31.7	23.5	94	69	3	7	3.8	☾ d p.
23	31	22.5	93	72	9	3	1.3	☊ a. ☾ p.
24	32.1	23	96	71	8	8	7.6	☊ a. ☾ d p.
25	30.1	23.5	97	77	10	9	1.5	☊ a. d p.
26	32.2	23	94	68	2	4	3.8	☊ a. ☾ ☽ p p.
27	31.4	24	97	85	3	10	7.7	☊ a. ☾ ² p p.
28	30.4	23.2	96	70	6	7	1.8	☾ p.
29	32.1	23	97	66	4	8	10.2	☊ a. d ● ☾ p.
30	30.4	23	97	70	10	8	4.6	d p.
31	30.4	23.2	96	80	10	10	9.2	☊ a. d p.
Mean	31.1	23.2	95.4	70.9	6.4	7.1	------	
Total	------	------	------	------	------	------	152	

DAPITAN.

[ϕ=8° 40′ N; λ=123° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.7	24.3	87	70	7	5	------	☊ a.
2	30.4	23.7	88	84	6	10	6.9	☊ a. ● ⊤ ☾ p.
3	30.1	23.1	92	78	10	7	3.6	● a.
4	33.4	23.7	86	67	6	4	------	☊ a.
5	33.8	23.6	87	69	4	7	------	☊ a. ☾ p.
6	33.5	23.6	88	67	8	7	------	☽ a. ⊤ a.p. ☾ p.
7	33.2	23.8	85	62	5	8	------	☾ p.
8	33.7	23.3	89	69	8	6	------	☊ a. ⊤ ☾ p.
9	33.8	23.2	87	65	7	7	------	☊ a. ⊤ p.
10	33.1	22.9	94	68	8	10	2.8	☊ a. ⊤ ● p.
11	32.7	23.3	91	69	10	10	9.9	☽ ☾ ☋ ☿ p.
12	33	23.6	91	70	9	7	------	● a. ☽ ☋ ☾ p.
13	33.8	23.4	93	70	6	8	------	☽ ⊤ ☋ ☿ ☾ p.
14	33.4	23.5	87	73	5	8	4.1	☊ a. ☽ p.
15	33.2	22.9	94	70	10	10	------	● a. ☽ ⊤ ☾ p.
16	32.7	22.8	89	63	8	6	3.6	☊ a.
17	32.9	22.8	87	67	7	8	5.8	● a. p. ⊤ ☋ ☾ p.
18	32.4	22.4	86	68	4	4	4.8	☊ a. ● ⊤ ☾ p.
19	32.1	21.8	89	72	6	10	2.8	☽ p.
20	32.5	22.6	88	69	5	4	28.4	● a.
21	32.3	22.1	86	69	7	9	2.3	● a. ☽ ☾ ⊤ p.
22	31.9	22.4	89	69	6	9	2	● a. ☽ ⊤ ☾ p.
23	31.6	22.7	86	71	5	8	52.1	● a. p. ☾ p.
24	32.3	22.9	86	70	4	7	1.8	☽ ● ☾ p.
25	31.2	22.6	87	71	10	8	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	2	
29	32.6	22.2	85	70	8	8	------	● ☽ a. ☽ ☾ p.
30	30.8	21.3	96	71	10	8	------	⊤ a. p. ☽ ☾ p.
31	29.3	21.4	83	70	10	10	43.1	● a. p. ☽ p.
Mean	32.5	22.9	88.4	69.7	7.1	7.6	------	
Total	------	------	------	------	------	------	176.0[1]	

BUTUAN.

[ϕ=8° 56′ N; λ=125° 32′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	23	93	73	8	10	14	☊ a. ● d p.
2	26.7	22.7	96	75	10	10	17.5	● a p.
3	29.5	22.4	96	69	7	7	12.4	☽ ● p.
4	29.9	22.1	94	68	8	4	------	⊤ ☾ p.
5	30.3	22.9	93	58	6	6	------	☊ a. ☽ d° ☾ p.
6	30.1	23.2	94	84	5	9	.8	☊ a. ●° p.
7	30.5	23.5	93	64	7	6	------	☊ a. ☾ p.
8	29.5	22.4	93	69	7	8	------	☊ ☋ a. ☾ p.
9	29.6	22.8	95	74	10	10	------	☊ ☽ a. ☾ p.
10	31.5	22.4	92	66	5	6	5.8	☊ a. ● ☾ ² p.
11	29.5	22.4	97	85	10	9	9.7	☊ a. p. ☿ p.
12	30	21.6	97	75	9	9	------	☊ a.
13	30.1	22.2	96	75	7	9	3.8	☊ a. ⊤ ● ☾ ☾ ☋ p.
14	30.5	23	94	68	5	7	2.8	☊ a. ☾ ☽ ● p.
15	30.3	22.4	96	71	6	9	------	☊ a. ☋ p.
16	29.5	22.1	96	66	10	7	.3	☊ a. ☾ ☽ ●° p.
17	30	22.4	93	70	9	8	------	☊ a. ☾ p.
18	30.9	23.2	95	67	6	7	------	☊ a. ☾ p.
19	30.2	22.4	96	69	6	7	7.4	☊ a. ⊤ ● p.
20	30.5	22.7	97	71	7	7	.5	☊ ●° ⊤ a. d ☾ p.
21	29.8	23.3	96	68	7	9	------	●° a. ☾ p.
22	30.3	23.2	97	90	8	9	5.1	☊ a. ☾ ● p.
23	29.6	23.4	97	69	10	9	11.2	☊ a. ☾ ² ● p.
24	30.1	22.6	97	91	7	9	19.3	d ⊤ a. ● ☾ ² p.
25	29.3	23	97	89	7	7	9.4	☊ a. ● a. p. ☾ p.
26	30	22	98	77	1	7	1.3	☊ a. ●° ☾ p.
27	29.5	22	97	84	8	9	.5	●° d a. p. ⊤ p.
28	28.8	23.5	96	84	9	9	------	☽ ⊤ ☾ p.
29	29.6	23.6	96	74	5	9	2.5	☽ ⊕ a. ⊤ ☽ ● p.
30	28.5	23.4	94	78	8	9	10.7	d a. p. ☽ ⊤ ● p.
31	27.3	23.6	96	95	10	10	12.4	☾ a. ● a. p.
Mean	29.8	22.8	95.4	74.7	7.4	8.1	------	
Total	------	------	------	------	------	------	147.4	

DUMAGUETE.

[ϕ=9° 18′ N; λ=123° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	22.2	89	72	10	10	------	☊ a. d p.
2	29.3	22	85	85	10	10	1.5	☊ a. ∞ d p.
3	30.5	22.6	86	68	10	10	------	☊ a.
4	30.6	21.9	88	69	10	8	1.5	☊ a. ●° p.
5	30.9	23	85	68	10	4	------	☊ a. ☾ p.
6	31.5	24.3	88	69	10	10	------	d a. ☾ p.
7	32.3	23.7	83	65	4	10	------	☾ p.
8	32.9	23.7	78	88	10	10	.8	●° ☾ p.
9	31	23.5	87	69	10	10	3.8	☽ a. p. ⊤ ● ☾ p.
10	31	22.8	89	71	10	10	------	☾ a. ☾ p.
11	30.5	23.2	84	77	10	10	------	d a. p. ☿° ☾ p.
12	30.7	22.4	88	68	10	10	------	☊ a. ☾ ☽ ² p.
13	30.4	22.5	86	74	10	8	7.4	☊ ● a. ☾ p.
14	31.8	23.3	81	68	10	10	.8	☊ a. ☽ ☾ p.
15	32.5	23.8	91	62	10	10	------	d ☽ a. ⊤ p.
16	31	23.4	86	70	10	8	16.6	☊ a. ● ☾ ☋ p.
17	30.5	23.2	95	71	10	10	7.4	● a. ☾ p.
18	30.3	23.3	91	72	10	10	18.8	● a. p. ☾ p.
19	30	23.3	90	73	10	10	------	☾ d a. ☾ p.
20	31.7	23.9	90	69	6	8	3	☊ a. ☾ p.
21	30.9	23.2	95	80	10	10	------	☾ ● a. ☾ p.
22	30.8	24.4	85	72	10	10	------	☾ a. ☾ p.
23	31.4	24.6	83	71	10	10	30.2	d a. ●² p.
24	30.9	22.4	81	69	10	9	25.9	d a. ☾ p.
25	29.6	22.2	97	74	10	10	61	● a. ☽ ☾ p.
26	30.5	23.8	87	70	6	5	.9	☊ a. ☾ p.
27	31	25	87	74	10	10	15.9	⊤ ● a. ☾ ● p.
28	30	23.9	89	75	10	10	7.1	d a. ☾ ● p.
29	30.5	25.3	84	83	10	10	------	☾² a. ☽ ☾ p.
30	30.8	24.1	90	84	10	10	2	☊ a. d ●° p.
31	31.5	23.5	91	75	10	10	4.6	☾ d a. d ☾ p.
Mean	30.9	23.4	87.4	72.7	9.5	9.4	------	
Total	------	------	------	------	------	------	209.2	

[1] 28 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

YAP (Western Carolines).
[ϕ=9° 29′ N; λ=138° 08′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	23.5	99	80	10	6	0.3	●a. d° a. p. ◠° p.
2	27	23.9	95	84	10	10	19.3	d° ● a.
3	30.5	24	96	87	9	5	3.3	●° a. d° a. p.
4	32.4	23.8	91	71	6	6	8.9	♌ a. ◠° ☇° p.
5	29.4	23.8	94	79	10	9	6.8	● d a. ○° d ☇° p.
6	27.4	23.6	87	85	8	10	17.8	☇° d° a. ☿ ↙° ◠° p.
7	31.7	24.6	79	74	8	8	5.1	○° ☇ ● p.
8	31.7	24	92	84	7	7	2.8	☿° a. d ◠° a. p.
9	30.5	23.6	92	86	8	8	12.2	d° a. ☿° ● ☇° p.
10	31.8	23.9	91	74	8	8	------	d° ◠° p.
11	31.3	25.6	85	72	3	4	.5	◠° ∪ ♅° p.
12	30.3	24.3	96	79	8	8	2	d a. p. ◠° ∪ ● p.
13	32.6	23.8	90	70	8	5	------	♅ p.
14	32.2	23.9	91	67	6	6	------	♌° a. ∪° ♅° p.
15	32.9	24.6	90	66	6	4	.3	☇° ○° a. ∪ ♅² p.
16	33.4	25.3	89	66	4	4	------	d a. ☇ p.
17	32.4	24.6	84	81	4	9	.8	♌° a. d a. p. ♅° p.
18	32.9	24.4	88	74	4	6	T	●a. p. ∪° ♅² p.
19	31.3	23.6	93	79	8	8	21.4	● a. p. ♅° p.
20	32.4	23.6	93	70	3	6	.5	∈ a. d a. p.
21	32.1	24.3	90	68	2	4	------	
22	31	24.6	94	84	5	9	11	♌ ☿° a. ◸ ● p.
23	31.6	23.9	94	87	9	10	1.3	☇ a. d p.
24	32.3	24.1	93	70	6	6	------	∈ a. ⊕ d° p.
25	33.4	24.6	92	67	4	7	2	♌ a. d p.
26	31.9	24	93	79	6	6	4.1	☇° ● a. d° p.
27	32	24.6	88	65	4	6	16.5	♌ a. d° ☇ p.
28	28.7	22.6	95	91	10	10	50.8	↙° ● ☇ a. d p.
29	27.7	23.8	86	81	10	10	.5	d a. ☇° a. p.
30	32.4	24.2	93	70	6	5	1.3	◠° a. p. ☇ ● p.
31	32.3	24.1	94	72	3	6	------	☇° d° p.
Mean	31.3	24.1	91.2	76.2	6.5	7	------	
Total	------	------	------	------	------	------	203.5	

MAASIN.
[ϕ=10° 08′ N; λ=124° 50′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	22.4	87	78	10	10	34.3	● ☇ p.
2	30.5	22.5	94	93	10	10	58.4	d a. p. ● p.
3	28.6	22.4	93	77	10	10	------	d p.
4	28.7	22.4	89	75	10	7	------	
5	30	22.5	90	79	8	7	------	d° ☇ ☿° p.
6	30.2	22.5	90	83	4	7	28.2	d a. ● p.
7	29.4	22.8	93	79	10	9	30.7	●² ◸ p.
8	29.8	24.6	84	80	10	10	------	♅² p.
9	29.7	24.4	92	86	10	10	45.7	● ☿² a. ♅ ● ◸²
10	29.8	23	95	85	10	10	------	∈° ♅ ☇² p.
11	29.9	23	95	88	10	10	------	
12	29.6	23	97	81	10	10	------	☿ d a. ∪ ◸ p.
13	29.5	22.8	92	80	10	10	------	◠° a. ◸ ∪ p.
14	32	24.1	92	79	10	10	------	∪ ◸° p.
15	30	23.8	93	79	10	10	21.3	d° a. ☿² a. p.
16	30.6	22.9	91	78	10	7	------	d° a. ♅ ☇ ∪² p.
17	31	23.9	92	77	10	10	------	∈² ◸ p.
18	31.6	23.6	92	72	10	8	------	
19	30.5	23.4	93	75	7	10	------	♅ ∪ p.
20	30.5	23	88	77	9	8	------	d a. p. ☇ p.
21	30.1	23	97	79	10	10	------	d a.
22	30	23.1	94	71	10	10	------	
23	31	23.8	91	77	10	10	12.2	d² ☇ p.
24	30.1	23.7	93	77	10	10	------	
25	31	23.5	91	79	10	10	------	d ☿ p.
26	31.1	22.5	83	71	10	4	------	
27	30.6	23.8	91	86	10	10	18.6	p a. d a. p. ☇² p.
28	30.7	23.4	95	81	10	10	------	
29	30.6	23.1	91	86	10	10	13.5	p a. d a. p.
30	30.6	23	95	85	10	10	55.9	d° ☇² ● p.
31	28	23.6	95	90	10	10	116.1	●²a. p. ↙° ☿ ☇² p.
Mean	30.2	23.2	91.9	80.1	9.6	9.3	------	
Total	------	------	------	------	------	------	434.9	

SAN JOSE BUENAVISTA.
[ϕ=10° 44′ N; λ=121° 55′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	23.5	95	77	2	7	5.1	♌ a.
2	30.5	22.9	94	82	10	10	42.2	☿ a. ● a. p. d p.
3	26	22.1	96	92	10	10	10.4	● a. p.
4	28.4	22.5	95	79	10	10	.8	●° p.
5	30.5	22	91	74	3	7	------	☿ p.
6	31	23.1	90	73	3	4	------	●° ☇ p.
7	31.3	23.3	91	78	4	10	5.3	☿ ● p.
8	29.1	22.7	95	81	10	10	7.6	d° p.
9	29.1	23.5	92	81	10	10	------	● a. ☇ p.
10	30	23.1	93	82	10	10	1.8	☿ ●° ☇ p.
11	29.9	22.2	96	73	10	10	------	d° ☇ p.
12	30.3	22.5	91	92	3	10	2.3	♌ ☿ a. ●° p.
13	30.7	22	88	74	2	10	27.9	♌ a. ● ◸ ◠ p.
14	29.6	22.8	97	79	10	10	45	● a. p. d° p.
15	30.1	22.9	94	82	10	10	------	♌ a.
16	30.7	23	90	72	2	4	------	♌ a. ☿ d° p.
17	30.8	23	90	72	8	10	------	◸ p.
18	30	22.9	91	95	6	10	13.4	☿ d a. ● p.
19	30.9	21.5	96	68	2	3	------	☿ d p.
20	31.4	22.6	93	66	2	3	------	
21	32.1	22.8	89	92	2	10	8.1	☿ ● ☇ p.
22	32.6	22.6	94	88	1	10	9.9	● p.
23	30.6	22.8	90	81	10	10	------	☿ ☇ p.
24	31.1	23.5	89	68	10	8	3.3	♌ a. ☿ ☇ p.
25	29.2	23.1	91	74	10	10	------	● a. d ☇ p.
26	32.4	22.6	92	68	2	2	------	♌ a. ☇ p.
27	31.4	22.4	91	69	3	10	12.7	
28	29.4	22.1	93	76	10	10	9.9	● a.
29	31.5	22.4	93	70	1	2	------	♌ a. ☇ p.
30	30.5	22.5	93	87	10	10	1.6	♌ a. d ☇ p.
31	29	23.2	94	82	7	10	26.7	♌ d a. ● p.
Mean	30.3	22.7	92.5	78.3	6.2	8.4	------	
Total	------	------	------	------	------	------	234	

CUYO.
[ϕ=10° 51′ N; λ=121° 01′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.5	23.7	97	------	6	7	13.7	● ◸° p.
2	28.2	24.3	97	86	10	10	18.2	d a. ● a. p.
3	28	23	97	93	10	10	11.7	d a. ● p.
4	29.6	23.8	97	80	10	9	8.4	d° ○ a.
5	31.4	22.6	98	68	7	4	------	● a.
6	31	23.9	95	------	6	5	------	♒° a.
7	31.3	26.1	91	------	7	8	------	d° ◸ p.
8	30.9	25.4	93	------	9	9	30	☿° ●° a. ●² p.
9	29.4	24	95	82	10	9	3.8	d a. ☇ p.
10	29.1	23.2	98	77	9	9	28.4	● a. ☇ p.
11	27.7	23.3	98	88	10	9	65.7	●² a. ⊕ p.
12	26.4	23.3	97	92	10	10	33.1	●² ☿ a. ● ♅ p.
13	30.4	22.7	98	82	9	7	------	
14	31.1	24.2	95	------	7	8	------	◠ d a. ∪ p.
15	30.1	23.9	97	82	8	7	3.8	● a. ∪° ♅° p.
16	30.4	24.1	97	------	9	7	3	○ ☇ p.
17	30.1	24.6	97	84	9	9	43.4	● a.
18	28.7	24	97	81	9	9	------	☿ ● a. ∪ p.
19	30.9	24.3	85	------	7	8	------	
20	30.7	26.5	89	84	8	8	------	◸ a. ☇ p.
21	30.6	26.7	89	86	8	8	.8	
22	30.6	25.2	89	77	6	9	------	◠ ●° a. ◸ d p.
23	30.6	24.2	91	------	9	8	.5	◠ ●° a.
24	31.6	25	92	------	8	7	61.2	◸ a p. ●² p.
25	29.7	22.7	97	76	10	9	2.5	● ◸ p.
26	30.9	26.3	90	76	8	6	------	☇ p.
27	30.7	26.9	89	86	8	9	2.5	☇ ●° p.
28	29.1	26.4	94	88	10	10	2	●° a. ☇ p.
29	31.1	26.7	91	------	9	9	------	☇ p.
30	30.6	26.8	90	------	5	9	------	⊕ d p.
31	31.6	27.1	80	78	10	10	4.8	●° ☇ p.
Mean	30.1	24.7	93.5	82.3	8.4	8.3	------	
Total	------	------	------	------	------	------	337.5	

METEOROLOGICAL DATA, ETC.—Continued.

BORONGAN.

[ϕ=11° 37′ N; λ=125° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	24	96	73	9	7	1.3	≡° p a. ◟ p.
2	25.3	23.4	91	92	10	10	27.7	● ⌐◹ a. ●² p.
3	32.5	22.7	91	65	3	7	.3	⊕ a. ●° ◠ ◟ p.
4	31.5	22.6	92	76	4	6	15.5	♌ a. ⊕ ● ⌐◹ p.
5	30.8	22.5	96	72	1	3	------	♌ ≡° a. ⌐◹ p.
6	31.1	22.6	95	69	3	3	------	♌ ≡° ⊕ a. ◟ p.
7	31	22.1	96	65	9	8	------	♌° ≡° a. ○ ◟ p.
8	32	22.8	96	71	6	6	------	♌ ≡° ○° a. ◟² p.
9	32.8	23.1	97	81	8	7	.8	♌ a. ⊤² ●° ◡ ◟ p.
10	30.6	22.4	96	71	3	7	------	♌ ≡° ○² a. ⊤ p.
11	31	22.4	97	67	6	5	------	♌ ≡ a. ⊕ a. p.
12	31	22	96	73	4	6	.3	○ a. ⊤ ●° ◟ p.
13	30.5	21.5	96	67	5	6	------	♌ ≡° ○ a. ◟ p.
14	30.6	21.8	96	84	5	5	4.8	♌ ≡° ● a. ◟ p.
15	30.6	22.2	97	88	4	10	37.6	● a. p. ⊤ ◟ p.
16	30.2	21.5	96	62	3	5	5.1	≡° a. ⊤ ◟ p.
17	29.4	22.6	95	77	10	9	12.7	● ≡° a. ●° p.
18	26.6	23.6	97	83	10	10	10.4	● a. ◟° ⊖ p.
19	30.6	21	95	68	2	5	22.9	♌ a. ◠ ●° p.
20	30.5	22.7	97	67	9	3	5.1	● ◠ a. ◟. p.
21	29.5	22.4	95	75	5	9	3.8	● ⌐◹ ≡ a.
22	31	22.4	97	68	7	6	17.5	● ≡ a. ◟ ●° p.
23	29.9	23	95	82	10	9	34.5	⊤ ● a. ●² p.
24	29.5	22.6	96	81	10	8	9.7	●² ≡ a. ● p.
25	27.8	22	96	77	9	9	17.3	◠ a. ● a. p.
26	30.5	22.1	97	71	6	6	9.1	≡ ● a. ◠ ● p.
27	29.7	23.4	96	81	10	7	88.6	≡ ◠ a. ● a. p.
28	28	23.6	96	80	10	9	9.1	●² ⌐◹ a. ● ◟ p.
29	27.5	22.4	97	92	4	10	50.3	⊤ ● a. ⌐◹ ●² p.
30	28.1	22.4	97	82	10	9	8.3	≡ a. ● a. p.
31	26.5	24.1	88	95	10	10	92.7	◟° a. ◟'² ● p.
Mean	29.9	22.6	95.4	76	6.6	7.1	------	
Total	------	------	------	------	------	------	485.4	

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	25.2	98	76	8	8	3.6	
2	27.5	25	98	98	10	10	60.4	
3	28.4	24.2	98	91	10	9	2	
4	30.6	24.2	99	82	10	8	------	
5	30.8	24.2	98	------	8	6	------	
6	31.5	25.5	98	------	7	4	------	
7	30.6	25.4	97	97	8	9	1.5	
8	30.5	25	98	------	9	10	------	
9	29.4	25.2	100	98	9	10	2.6	
10	29.6	23.5	99	98	10	10	2.8	
11	30.8	24.2	98	91	6	9	5.8	
12	30.4	23.8	100	88	7	9	27.2	
13	31.2	24	100	79	6	8	11	
14	31	24	97	88	9	9	1.1	
15	30.4	24.5	90	89	9	9	50.8	
16	30.4	22.6	98	------	7	6	.3	
17	28.8	25.2	98	86	9	9	1.6	
18	29.4	24.4	98	71	8	9	------	
19	30.5	23.8	97	82	6	4	------	
20	30.2	23.6	98	85	3	8	------	
21	30.8	24.5	98	96	5	9	1	
22	32.4	24.6	98	------	6	9	------	
23	28.6	25.6	98	92	9	9	1	
24	31.4	25.2	99	------	9	8	------	
25	31.8	23.4	98	------	4	4	------	
26	31.6	24.8	97	------	3	7	------	
27	31.8	24.5	100	------	4	8	5.1	
28	28	24.2	98	92	10	9	8.1	
29	31.6	24.6	98	------	4	9	3.6	
30	27.4	25	100	98	10	10	3.1	
31	28.2	26.5	95	98	8	10	21.8	
Mean	30.3	24.5	97.9	89.3	7.5	8.3	------	
Total	------	------	------	------	------	------	214.4	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	------	------	------	------	------	
2	------	------	------	------	------	------	------	
3	------	------	------	------	------	------	------	
4	------	------	------	------	------	------	------	
5	------	------	------	------	------	------	------	
6	------	------	------	------	------	------	------	
7	------	------	------	------	------	------	------	
8	------	------	------	------	------	------	------	
9	------	------	------	------	------	------	------	
10	------	------	------	------	------	------	------	
11	------	------	------	------	------	------	------	
12	------	------	------	------	------	------	------	
13	------	------	------	------	------	------	15.2?	
14	29.3	23	94	80	10	8	11.2	◠ a. ● a. p.
15	27.2	23.5	95	86	6	10	31.2	● a. p. ◟ p.
16	30	23.2	98	72	3	0	23.6	
17	28	23.1	95	84	10	10	8.6	● a. p.
18	28.9	23.8	80	74	10	9	8.2	● a.
19	30.2	24.1	93	72	6	0	1.5	● a.
20	30.4	23.3	93	67	0	1	9.7	● p.
21	30.5	24.1	95	74	8	4	1	● a. ◠ d p.
22	30.5	24.3	92	70	6	6	1.3	● a.
23	30.8	25	87	75	3	4	7.6	● a.
24	30.2	24.1	90	76	6	2	4.6	● a. p.
25	30.6	23.3	92	66	0	0	.8	
26	30.6	26.3	84	71	5	0	------	● a.
27	30.3	24.1	93	72	4	4	57.4	● a. p.
28	27.3	23.6	95	86	10	10	5.3	● a. p.
29	30.3	25.1	90	74	3	3	2.3	● a. p.
30	29.3	25.1	86	84	6	10	3.3	● p.
31	------	26.2	87	75	10	10	.8	d° a. ● a. p.
Mean	29.7	24.2	91.1	75.4	5.9	5.1	------	
Total	------	------	------	------	------	------	------	

SUMAY, GUAM (LADRONES ISLANDS.)

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	23.4	86	72	2	7	1.5	
2	29.8	24	84	71	6	10	1.5	
3	29.4	24.4	85	80	3	10	3.8	
4	28	24	92	84	7	10	77.5	
5	29	22.8	97	75	10	10	19.1	
6	28.4	23.4	88	90	10	10	38.1	
7	29	22.8	95	73	10	10	------	
8	29.6	26	78	70	6	7	------	
9	29	25.6	84	76	2	10	8.9	
10	28.6	24	91	92	10	10	21.6	
11	28	24.2	91	83	10	10	5.1	
12	29	23	85	76	10	8	7.6	
13	29.6	24.8	84	77	6	10	43.1	
14	27.6	22.8	95	84	10	10	------	
15	30	23.6	87	71	4	10	------	
16	30.4	24.8	84	69	3	6	3.8	
17	29	23.8	92	87	7-	10	10.6	
18	29	23	92	86	8	9	3.3	
19	30	23.2	86	80	4	10	------	
20	30.4	23.8	84	71	3	6	------	
21	29.4	24	89	71	10	8	6.4	
22	31	24	86	69	6	8	3.8	
23	30.6	24	92	77	10	10	1.8	
24	27.8	23.6	92	85	10	10	12.2	
25	30	24	87	71	5	3	.5	
26	29.8	25	85	68	10	6	4.3	
27	28	25	90	92	10	10	26.7	
28	29.4	22.8	85	84	5	10	4.5	
29	28	25.8	84	92	5	10	8.9	
30	29.4	25.4	84	75	3	3	5.1	
31	29.8	23.6	86	71	8	10	------	
Mean	29.3	24	87.7	78.1	6.9	8.7	------	
Total	------	------	------	------	------	------	319.7	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	23.5	98	76	8	10	------	
2	31.4	22.8	94	82	10	10	14.2	⊤ ● p.
3	29.9	21	93	80	10	10	8.9	● a. p p.
4	29.6	22.9	97	81	10	10	.5	d p.
5	31.4	22	98	71	8	9	------	
6	30	25.5	96	76	6	4	------	
7	30	22.9	94	83	8	9	------	⌐◪ p p.
8	30.9	22.4	95	75	10	10	.5	
9	31.5	23.8	92	80	10	10	2.3	p a. p. ⌐◪ p.
10	31.1	22.9	96	73	10	10	34	⊤ ●² p.
11	29.4	22.3	97	78	10	10	5.8	p a. d ●° p.
12	30.3	24.1	94	88	10	10	12.1	p a. p. ● p.
13	31.4	21.1	96	70	10	10	8.4	p a. p² p.
14	27.4	23.5	95	84	10	10	33.8	●° a. ●² p.
15	27.8	23	96	78	10	10	49.8	●² a. p.
16	30.4	22.4	99	77	10	9	11.7	
17	30.1	23	97	72	10	10	60.4	● a. ●² p.
18	30.6	23	98	70	10	8	------	
19	31.1	22.5	97	66	10	5	9.4	p a.
20	30.9	22.5	97	70	10	4	2.5	● a.
21	31.6	25.5	85	74	10	10	15.2	● ⊤ p.
22	30.8	24	98	79	10	10	21.1	◠° ⊤ ● p.
23	31.6	24.4	96	68	10	9	1.5	p p.
24	31.4	25.5	80	56	10	4	7.6	● a. d p.
25	31.2	23.9	94	67	10	3	3.8	● a.
26	31	23.8	94	90	9	2	9.7	● p.
27	30.5	23.6	96	73	6	10	3.8	p a. p.
28	31.1	24	84	71	10	10	6.4	●° a. p p.
29	30.8	24.4	88	98	10	10	11.2	d ● a. p.
30	30.6	24.6	84	86	10	10	2.8	p p.
31	29	24	93	75	10	10	38.4	p a. ● p.
Mean	30.5	23.4	93.9	76.4	9.5	8.6	------	
Total	------	------	------	------	------	------	375.8	

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.2	24	92	63	6	6	------	◟ p.
2	30.4	24.3	95	82	10	10	109.2	◟ a. ⌐◪² ●² p.
3	31	23.2	96	79	10	9	.3	●° a. d ◟ p.
4	31.5	24.2	93	67	9	7	------	Ω° a. ◟ p.
5	31.8	23.6	94	66	8	4	------	d° ◠ a. ⊤ ◟ p.
6	32	22.5	96	89	5	9	1.8	⊕ ◠ a. ●° ◟ p.
7	32	22.3	95	80	9	8	31.2	⊕ ◠ a. ● ⊤² ◟
8	28.7	24	97	85	10	10	.3	● a. ◟ p.
9	30.2	24.4	96	76	10	10	------	d° a. ◟ p.
10	31.3	22	96	76	9	8	6.9	d ● ◟ p.
11	30.5	22.5	96	80	7	9	------	◟ p.
12	28.8	22.6	96	84	8	10	.5	d a.
13	30.6	21.5	97	72	4	7	------	
14	31.2	22.8	96	92	8	9	15.2	Ω ●° a. ● p.
15	30.3	23.5	96	77	9	9	1.8	d a. p.
16	31	22.3	98	88	8	8	4.3	d a. ● ◟ p.
17	27.7	23	97	83	10	10	39.9	●² a. d p.
18	31.2	22.9	95	68	7	8	.3	
19	32	23.2	92	65	6	6	------	d a.
20	31.2	21.5	99	84	3	7	8.2	d ● a. p. ◠° p.
21	28.8	22.2	97	93	4	10	8.5	⌐◪ ● a. ◟ p.
22	31.5	23.7	89	83	7	9	9.9	◠ a. ● a. p. d p.
23	30	23.5	95	89	9	9	23.8	✓° a. ● ◠ a. p.
24	32.2	23.6	89	59	8	5	1.3	●° ◠ a. d° ◟ p.
25	31.2	22.4	96	75	4	7	3.4	Ω² ●° a. d° p p.
26	32.6	23	91	65	5	5	------	◟ p.
27	33.4	22.6	86	83	4	8	1.8	Ω a. ◠² ● p.
28	28.2	23.5	83	83	10	10	22.6	⌐◪² ● a. ◟ p.
29	32.9	23.2	96	65	9	8	6.4	◠ d a. ◟ ● p.
30	31.3	24	92	75	9	10	7.1	d° ● a. ⌐◪ p p.
31	30	23.4	77	80	8	10	28.7	◠ a. ✓° ● ⊤ p.
Mean	30.9	23.1	93.6	77.6	7.5	8.2	------	
Total	------	------	------	------	------	------	333.4	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.3	23	95	65	7	6	------	
2	32.2	23.4	97	63	9	10	63.5	●² p.
3	30	22.6	98	74	10	10	10.5	●° a. ● p.
4	30.8	23.4	96	73	10	10	------	
5	33.7	22.5	96	59	5	6	------	
6	32.9	21.9	98	60	9	5	------	
7	32.2	22.2	99	63	10	6	------	
8	29	23	95	78	10	10	29.5	
9	29	22.5	98	85	10	10	3.4	●² a. d p.
10	31.5	21.2	98	68	10	8	.6	
11	31.3	22.2	98	82	10	10	21.6	● ≡ a.
12	28.2	22.3	98	92	10	10	13	● a. p.
13	32.2	20.3	98	69	10	8	------	≡° a.
14	30.1	22	97	80	8	9	------	
15	30.1	22.9	98	74	10	9	4.1	●° a.
16	32.3	22	97	65	9	8	------	
17	28.5	22.6	93	91	9	10	14.9	◠ a. ● a. p.
18	31.5	21.6	94	65	5	7	------	
19	31.6	21.5	96	67	8	7	------	
20	31	19.9	99	80	4	10	3.6	d ●° p.
21	32	21	98	92	4	9	28.5	● p.
22	29.9	20.6	98	88	8	10	------	
23	32.5	21.5	98	72	7	8	4.8	●° a. p.
24	32.1	21.8	98	69	6	8	.3	●° p.
25	32.6	19.7	98	66	4	9	------	
26	32.3	21.5	96	65	4	6	------	
27	32.6	21.5	96	61	4	8	9.7	● p.
28	29	23.5	97	93	8	10	5.6	d a. ●° a. p.
29	32.5	22	98	83	9	9	6.7	d a. p. ●° p.
30	27.3	23.9	97	87	10	10	26.8	● d a. p.
31	29	23.5	95	85	9	10	16.3	● d a. p.
Mean	31.1	22	97	74.6	7.9	8.6	------	
Total	------	------	------	------	------	------	263.4	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.6	23.5	98	66	4	5	------	
2	33.5	22.5	98	85	7	10	4.5	Ω ⊤ a. ●° d p.
3	30.2	23.2	98	80	10	9	23.1	● d a.
4	29.1	23.3	97	81	8	9	.3	● a. d° p.
5	32.2	21.9	98	68	3	4	------	Ω² a.
6	32.8	22.7	99	71	3	3	------	≡° Ω² a. ◟ p.
7	32.9	22.8	98	72	4	7	14	Ω a. ⌐◪ ● p.
8	32.4	22.7	94	74	9	10	18.8	⊤° a.
9	31.9	22.2	96	89	10	10	3.3	✓°a. ● a. p. d° p.
10	31.6	22.7	97	92	8	10	14.5	● ⌐◪° d p.
11	30.4	22.4	98	77	8	10	------	Ω² a.
12	31.3	22.8	94	92	10	10	21.8	d° a. p. ● ⊤ p.
13	31.7	21	96	72	6	7	41.4	●² ⊤ p.
14	30	22	96	77	8	10	.3	d° a. p.
15	31.6	21.9	96	75	4	8	------	d° a. p. ⌐◪ p.
16	32.3	21.6	97	72	7	7	31.2	⊤ ● p.
17	28.9	22.6	97	88	6	9	22.9	● a. p ●° ◠ d° p.
18	31.9	22.4	97	60	9	6	------	
19	32.2	20.7	93	65	4	6	------	
20	31.2	20	96	75	9	7	2.1	p a. p.
21	33.1	22.7	93	71	8	7	1.8	p a. p. ● d° p.
22	32.5	22.4	95	65	9	8	------	
23	34.4	23	92	62	7	7	------	◯° p.
24	32.9	23.5	92	59	8	4	------	◟° p.
25	33.3	22.7	92	62	4	6	------	
26	33.9	22.7	91	49	3	3	.5	p a. ◟° p p.
27	32.3	23	94	68	3	8	------	p ◟° p.
28	32.6	22.3	96	62	9	8	------	
29	32.8	24	91	70	8	7	5.6	d° a. ● p.
30	32.1	22.6	96	68	6	8	.3	✓° d° p.
31	32	23.7	94	81	9	10	6.9	p a. p. ● p.
Mean	32	22.5	95.5	72.5	6.8	7.5	------	
Total	------	------	------	------	------	------	213.3	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.5	21.1	98	71	7	5	2	p a.
2	28.9	19.6	98	74	7	10	99.4	♌ ≡ a. ●² a. p.
3	26.5	19.3	97	78	10	10	39.1	● a. p.
4	25.3	20.5	98	82	10	7	------	☌° p.
5	27.2	20.3	98	73	5	8	47	●² p.
6	31	20.4	98	65	3	6	------	
7	31.1	20.6	98	64	7	8	63.5	●² p.
8	31.5	20	97	63	5	9	1.8	●° ☿° a.
9	29.5	19.8	98	74	6	9	39.2	●² p.
10	28.2	19.9	97	76	7	10	48.5	●² ☿° p.
11	27	20.2	98	74	5	8	------	♌ ≡ a. p p.
12	27.3	20.6	98	74	7	9	3.8	● p.
13	29	20.5	97	74	6	8	9.4	≡ a. ● a. p.
14	29.5	20.1	98	74	10	10	11.7	● a. p.
15	28.1	21.8	97	74	3	7	------	
16	30.8	21.2	98	65	2	8	2.5	≡ a. ● p.
17	30.2	21	97	65	9	9	------	☿ a. d a. p.
18	28.5	20.5	98	70	2	5	------	
19	29.5	20.8	98	65	2	8	5.3	≡ d a.
20	29	19.8	98	69	9	8	------	p a.
21	29.8	19.3	97	69	10	9	13.8	● a. p.
22	29	19.9	98	68	3	2	------	
23	29.6	20	98	67	7	6	------	
24	29.9	20.1	98	65	5	8	------	♌ ≡ a.
25	30.2	20.4	98	64	2	9	------	☿ p° p.
26	30.5	20.1	98	65	2	7	------	
27	30.1	20.5	98	65	3	8	------	p° p.
28	30.6	20	98	64	10	7	3.3	● a.
29	30	20.8	98	65	7	8	------	
30	30.3	21	97	64	2	5	------	
31	30.1	20.3	98	64	7	9	------	d a. p.
Mean	29.2	20.3	97.7	69.2	5.8	7.7	------	
Total	------	------	------	------	------	------	390.3	

SANTA CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.1	22.2	96	71	6	4	------	≡° a. ● d p.
2	33.2	22.7	98	90	9	9	21.4	♌ ≡ ● a. ↙ p.
3	30.7	23.1	94	93	10	9	11.2	● a. ●² d ☿ p.
4	------	22.8	98	72	9	8	------	≡ a. ● p.
5	31.4	21.6	93	61	4	4	------	♌² a.
6	33.3	22.4	97	67	4	4	------	♌² ≡° a. ☿ ↙ p.
7	33.2	22.5	98	78	5	9	.8	♌ a. ☿ ☾ d ↙ p.
8	33.1	22.6	97	92	9	9	14.8	☾ ☿ a. ↙ ☿ ● p.
9	31.8	24.5	98	81	9	10	4.8	● a. d ☿ a. p.
10	31.7	22.2	97	96	9	9	32.8	● ☿ a. p. d p.
11	31.8	22.4	98	87	9	9	19.8	d a. ● p.
12	28.8	22.8	88	74	9	8	1	●° a. ● p.
13	30	21.7	97	73	8	8	5.6	♌ d a.
14	30.7	22.5	95	96	8	10	52.1	≡° ●² a. ● p.
15	------	22.2	96	72	9	8	.5	●° a. p.
16	30.7	21.4	97	64	8	5	4.3	♌² ≡ a. ↘ p.
17	32	21.3	88	87	9	9	7.9	● d a. p. ☿ ↘ p.
18	------	22.4	93	56	3	3	------	● ☾° p.
19	31	20.9	98	68	4	5	------	♌² ≡ d a. p p.
20	31.2	20.2	98	68	4	9	6.3	♌² ≡² ● a.
21	30.4	23.4	94	76	8	8	2.3	d a. p. ●° p.
22	31.6	23.2	96	72	9	9	12.2	● ◪ ² a. ☾ ↘ p.
23	30.5	23.3	95	67	8	8	------	● a. d a. p. ↘ p.
24	31.8	22.1	92	62	2	4	------	d a. ↘ p.
25	32.4	21.7	97	68	3	4	------	♌² ≡ ● a. ↘ p.
26	31.8	21.6	97	72	6	6	1.8	♌ ◠° p a. ↘ p.
27	31.8	21.7	98	74	3	7	4.3	≡ p a. ↘ p.
28	30.9	22.3	85	72	9	9	6.1	●° ◠ a. d ↘ p.
29	30.9	23.7	96	70	9	6	6.6	● ☿ a. ●° ↘ p.
30	32	23.1	87	64	8	8	13.5	☾° ● a. p. ◪ p.
31	31.1	24.2	91	84	8	9	9.9	● a. d ☿ ↘ p.
Mean	31.5	22.4	94.9	75.1	7	7.3	------	
Total	------	------	------	------	------	------	240	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.9	22.4	96	72	8	6	4.8	d² a. ●° ↘ p.
2	29.6	22.3	95	82	9	9	4.9	♌° a. p d p.
3	26.9	22	96	91	9	10	14.4	●° p. d a. p.
4	28.2	21.9	96	85	10	9	4.1	p° ⊕ p.
5	31.9	21.9	97	65	5	6	------	♌° a. ☌° p.
6	32	22.4	98	67	8	6	------	♌° a. ☿ ◠ ↘ p.
7	31.6	22.3	96	76	5	8	8.3	♌° a. ☌ ● p.
8	29.2	21.2	96	86	9	10	3.6	♌° ≡° a. ☿ d² p.
9	30.4	23.1	95	77	10	10	10.3	☿ ● p.
10	30.1	21.9	94	88	9	9	17.9	☿ ● p.
11	28.3	21.8	98	79	9	9	7.7	≡ a. ● ◪ d p.
12	30.1	21.4	95	82	7	8	10.4	♌° ●° a. p² ☿ p.
13	29.1	20.2	92	94	5	9	18.4	●² ☿ d p.
14	28.9	20.7	95	96	6	10	3.8	≡° d a. ☿ ●° p.
15	30.1	21.4	97	73	8	8	.5	≡° d a. ↘ p.
16	30.8	20.5	93	95	7	9	22.1	♌ a. ◪ ●² p.
17	28.1	21.6	96	96	9	10	20.4	● a. p. ☿ d° p.
18	31.4	21.5	94	60	5	5	------	♌° a.
19	31.6	20	91	73	7	7	------	♌° ☌ ☌ a.
20	30.4	20.9	89	94	1	9	10	♌²a. ●°a. p. d°p.
21	30.6	21.1	96	64	9	9	1.5	d° a. ●° ☿ ↘ p.
22	30.2	21.9	95	90	8	10	------	☿ a. p. p ⊕ p.
23	30.2	21.7	94	69	7	8	------	♌² d° a.
24	32.8	21.4	87	49	1	4	------	♌² a. ☌ p.
25	32.9	21.3	84	58	2	4	------	♌² a. ↘ p.
26	32.2	20.4	90	71	2	6	------	♌² a.
27	31.4	21	95	66	3	9	------	♌² ◠ ² a. ↘ ² p.
28	31.5	21.3	93	51	7	9	------	♌° a. ☌ ↘ ² p.
29	31.9	21.2	91	57	8	7	.5	d° a. ↘ ☿ p.
30	32.4	21.1	91	54	6	7	------	♌ a. ↘ p.
31	31.7	21.1	92	73	7	8	1	♌² a. ◠ ↘ d p.
Mean	30.5	21.4	93.8	75.3	6.6	8	------	
Total	------	------	------	------	------	------	164.6	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	23.3	96	81	10	10	27.2	d ●° a. ● p.
2	31.6	22.7	96	91	10	10	3.2	d a. ●° ↘ p.
3	29	22.4	96	85	10	10	69.8	d a. ●² p.
4	26.3	22.9	95	94	10	10	14.1	d a. ●° a. p.
5	30.9	22.5	92	70	10	10	------	☾ a. p. ↘ p.
6	31.2	21.8	96	73	10	6	------	☾° a. p. d ◪ p.
7	31.4	23	97	73	9	9	1	☿ d ↘ p.
8	31	22.8	89	85	10	10	19.9	d a. ● ☿ p.
9	30.6	23.3	95	75	10	10	.2	d a.
10	30.5	22	97	82	10	10	25.8	☿ ● ↘ p.
11	29.4	22.1	99	73	10	10	7.8	d ●° p.
12	31	21.7	96	79	9	10	.3	☿ d a. p. ☾ ◠ p.
13	31.3	21.1	96	66	7	9	1.9	◪ d p.
14	31.5	22.8	94	64	9	8	2.1	☿ d ●° ↘ p.
15	31.8	21.6	96	67	8	9	.1	☾° ◪ d p.
16	31.4	22.8	95	70	10	5	2	◪ ● ° p.
17	31.4	22.5	94	69	7	7	------	d ↘ p.
18	33.1	22	91	70	6	7	------	☿ a. p. d ↘ p.
19	31.9	21	96	64	1	3	------	♌ a. ⊕ p.
20	31.5	21.1	97	66	0	1	------	
21	32.4	20.5	95	65	0	4	------	
22	32.5	20.7	96	64	2	8	------	☾° a. ☿ d p.
23	33.5	22.1	86	62	2	2	------	↘ p.
24	33.2	21	97	63	1	3	------	≡ a.
25	32.8	20.9	94	60	1	3	------	♌ a.
26	32.8	20.5	96	61	0	4	------	♌ a.
27	32.4	20.9	94	67	2	8	------	↘ a. p. p° p.
28	32.3	21	96	63	7	8	------	≡° ⊕ a.
29	32.6	20	95	60	6	5	------	≡° a. ↘ p.
30	32.7	21.3	96	63	4	4	------	≡° a. ⊕ ↘ p.
31	33	21.7	93	63	4	5	------	⊕ p.
Mean	31.5	21.8	94.9	70.6	6.3	7	------	
Total	------	------	------	------	------	------	175.4	

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	23.9	97	80	8	8	8.9	☊ a. ● a. p.
2	32	22.8	97	68	7	10	33	☊ a. ● p.
3	32	23.3	97	79	10	10	------	☊ a. d p.
4	31.9	23.6	97	83	10	10	1.3	☊ d° a. ● p.
5	32.8	23.1	97	67	9	8	------	☊ ☰ a. ☾ p.
6	34.4	22.9	96	59	7	7	1.3	☊ ☰° a. ● p.
7	33.2	23.9	96	63	7	9	.8	☊ ☰° a. ● ⊤ p.
8	32.8	23.4	96	63	4	9	10.2	☊ a. ● p.
9	32.7	23.5	97	60	9	10	7.9	☊ ☊ ☰ a. ● p.
10	32.2	23	97	61	7	9	1	☊ ☊ ☰ a. ● p.
11	32.2	23.3	96	61	8	9	------	☊ a.
12	33.4	22.1	95	56	7	4	------	☊ a.
13	33.5	22.4	96	58	4	10	7.6	☊ ☰° a. ☾ ● p.
14	32.8	22.5	98	59	5	8	------	☊ ☰ a.
15	33.1	22.4	96	56	4	9	------	☊ a. p ⊤ p.
16	32.5	22.4	96	69	4	5	------	☊ a.
17	32.4	24	96	60	7	5	------	☊ a.
18	33.2	22.2	96	55	3	4	------	☊ ☰° a.
19	32.9	21.5	93	57	3	3	------	☊ a.
20	33.7	21.4	88	55	4	2	------	☊ a.
21	34	21.6	92	61	4	9	------	☊ a.
22	31.6	22.4	96	62	4	7	------	☊ a.
23	34.4	21.6	96	52	5	8	------	☊ a.
24	34.8	21.6	95	55	4	9	------	☊ ☰° a.
25	34.2	21.5	95	54	3	4	------	☊ a.
26	34.6	21.7	96	52	2	8	------	☊ a. d° p.
27	34.2	22.7	93	54	8	4	------	☊ a.
28	33.4	21.7	96	52	2	8	------	☊ a.
29	34.8	20.8	94	51	4	3	------	☊ a.
30	35.4	21.5	94	49	2	4	------	☊ a.
31	34.8	22.4	96	50	7	8	1.3	☊ a. ● p.
Mean	33.2	22.5	95.5	60	5.5	7.1	------	
Total	------	------	------	------	------	------	73.3	

SAN FERNANDO UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.4	24.2	90	89	8	9	2.3	☌ ●° p.
2	32	24.2	93	79	8	8	22.4	☐ ☾ ●² p.
3	29.2	23.4	97	80	10	10	2.5	●° p.
4	28.8	23.5	97	81	10	10	------	☌ p.
5	31.7	23.6	87	74	5	5	------	☾² p.
6	31.5	24	93	70	3	3	.3	☌² p.
7	31.6	23	96	72	2	3	------	
8	31.5	24.3	95	69	4	5	27.9	●² p.
9	29.4	23.2	96	75	10	10	------	
10	30.8	22.4	96	69	3	6	------	☾° p.
11	30.6	23.5	93	69	4	2	------	
12	31	22.5	92	68	3	2	------	
13	31.1	22.9	94	67	2	3	------	☰° a. ☿² p.
14	31.4	22.2	92	67	5	4	------	
15	32.2	23.6	94	65	6	3	------	☿° p.
16	31.3	23.3	92	69	3	1	------	
17	31.4	24	94	67	1	1	------	
18	32	22.3	94	63	3	1	------	
19	31.6	22.2	97	74	1	1	------	☌° a.
20	32	23.5	91	64	2	1	------	☌° a.
21	32.3	22.9	91	67	2	1	------	
22	32.2	22.2	93	72	1	4	------	
23	32.5	22.7	94	64	1	2	------	
24	32.4	22.8	92	68	1	1	------	
25	32.6	22	91	64	1	1	------	☌° a.
26	32	22	95	66	1	2	23.4	☾° ●² p.
27	31.3	24	99	70	3	2	------	
28	31.7	23	96	68	1	2	------	
29	31.5	21.9	93	69	2	2	------	
30	31.9	23.8	93	68	1	1	------	
31	33	22.2	90	69	1	4	------	
Mean	31.5	23.1	93.5	70.2	3.5	3.5	------	
Total	------	------	------	------	------	------	78.8	

ECHAGÜE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	35.7	22.6	97	54	7	5	52.3	☊² a. ☐ ☾² ☌° ●² p.
2	33.4	21.6	100	59	10	9	.8	●° ☰² a ◯° ☐ ☾° d²
3	30.6	23.3	98	68	10	10	2	d° a. p. ☾ p.
4	29.3	23.4	98	71	10	10	.5	d² a. p. ⊤° p.
5	34.4	22	98	57	7	7	19.3	◯° a. p. ☐ ☾² ● p.
6	32.8	23	99	64	10	9	10.7	● a. p. ☐ ☾ p.
7	32.2	22	99	63	10	10	7.1	◯° a.p. ☐ ☾° ●° p.
8	30.3	23.1	99	72	10	10	7.4	⊤° a. p. d² p.
9	30.1	23.3	99	74	10	10	.8	d° a.
10	29.4	23.3	97	79	10	10	------	◯° a. p.
11	29.9	21.9	99	64	10	10	------	
12	31.8	22.4	97	56	10	9	27.4	⊤° ●² p.
13	29.6	22.2	99	83	10	10	.3	●° d° a. ☿² p.
14	28.8	21.6	98	75	10	10	------	d° ☿° p.
15	31	22.5	97	62	10	4	1.3	d° a. d² p.
16	29.2	21.8	97	72	10	10	1.8	d² p.
17	30	22.7	97	64	10	10	------	d° a.
18	31.8	22.1	97	56	10	3	------	d° p.
19	32.5	22.4	98	60	3	5	------	⊕° a.
20	33	21.9	97	58	7	2	------	☊² ☰° a.
21	32.6	21	98	58	10	4	------	☊² ☰ a. d° ☾° p.
22	25	22.4	97	95	10	10	6.4	●° a. d° ⊤° a. p.
23	33	21.6	100	57	10	7	------	☰² a. ☿² p.
24	33.3	22.2	98	55	5	2	------	☊² a.
25	32.6	22.1	98	55	5	4	------	☊² a. ◠° p.
26	29.6	22.8	97	71	10	2	2	d° a. d² p.
27	30.3	21.4	98	66	4	9	1	d² p.
28	32.1	22.6	98	60	10	6	------	d² ◠² a.
29	30	20.5	97	69	7	10	------	☊² ☰° a. ⊤° d° p.
30	31.7	22.3	98	65	10	10	5.3	☰ a. ☐ ☾ d² p.
31	30.7	22.8	97	85	10	10	13	d² ⊤° a. p. ● p.
Mean	31.2	22.3	97.9	66	8.9	7.9	------	
Total	------	------	------	------	------	------	159.4	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	25.5	86	66	8	9	2.5	☊² a. d ☾ p p.
2	30.7	25.6	83	66	10	7	69.1	●² p.
3	26.7	25	85	85	10	10	------	●² a. d p.
4	27.4	24.5	87	81	10	10	1.8	d p p.
5	30.6	24	86	75	7	8	------	☾ p.
6	30.1	25.6	84	72	10	8	------	☊ a. d p.
7	30.4	24.1	86	73	7	6	5.8	☾ p p.
8	30	25.5	87	72	9	10	47	●² p.
9	28.7	24.1	85	73	10	10	------	●² a. d° p.
10	29.7	24	86	73	5	6	46.5	☊² a. ●² p.
11	29.6	23.9	85	66	10	5	------	●² d a. ☿ p.
12	30.3	23.8	83	68	4	3	------	☊² a. ☾ p.
13	30.7	24.5	83	67	5	4	------	☊² a. ⊤ ☿ p.
14	30.1	23.5	80	67	3	4	------	☊ a. ⊤° a. p.
15	30.1	25	83	69	10	5	------	☊ a. ☾ p.
16	30.3	24.5	85	71	10	3	------	☊ a.
17	30.7	24.4	83	65	4	2	------	☊² a.
18	30.5	24.7	83	70	3	4	------	☊² a.
19	30.2	23.7	83	69	0	1	------	☊² a.
20	30.7	23.6	83	70	4	3	------	☊² a.
21	30.9	23.5	85	68	0	0	------	☊² a.
22	31	23.5	82	68	0	7	------	☊² a. ⊤° p.
23	30.9	23.5	83	62	0	0	------	☊² a. ⊤° p.
24	31.5	23.7	83	71	0	1	------	☊² a.
25	30.8	23.5	86	69	0	3	------	☊² a.
26	31.6	23.9	86	68	2	8	------	☊² a. ☾ p.
27	30.8	24.2	79	65	6	2	------	☊² a.
28	31.2	23.6	81	66	1	2	------	☊² a.
29	31.2	22.8	82	61	2	1	------	☊² a.
30	31.8	22.7	------	65	0	1	------	☊² a.
31	31.7	23.2	82	64	0	8	------	☊² a. ☾ p.
Mean	30.4	24.1	83.8	69.2	4.8	4.9	------	
Total	------	------	------	------	------	------	172.7	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.8	24.5	98	67	10	8	------	☊ a.
2	30.8	24.9	97	75	10	10	2.8	☊ a. ☌² p.
3	24.6	23.2	97	97	10	10	26.6	● a. ☌ p.
4	24.8	22.5	98	97	10	10	15.7	● a. ☌° p.
5	32	22.6	97	70	10	9	------	
6	31.5	23.5	97	70	9	8	.5	☊² a. ☌° p.
7	32	23.8	97	71	4	7	6.6	☊² a. ● p.
8	30.7	24.2	97	90	5	10	34.3	☊² ☌ a. ●² p.
9	29.7	22.6	99	77	10	10	------	☊² a. ☋ p.
10	33.5	21.5	97	52	8	4	------	☊² a.
11	31.9	21.4	93	59	3	10	------	☊² a.
12	31.8	22.8	90	64	9	3	------	☊ a.
13	31.7	23	81	64	1	2	------	
14	33.1	20.1	98	61	1	2	------	☊² ≡ a.
15	32.4	23.6	94	63	7	3	------	
16	31.9	23.3	86	70	7	3	------	☥° p.
17	33.5	21.9	94	61	1	2	------	
18	33.2	21.4	91	64	0	2	------	
19	32.2	21.2	96	66	0	1	------	☊ a.
20	32.4	21.4	96	68	0	1	------	☊² ≣° a.
21	33.4	20.6	98	63	0	1	------	☊² ≣° a.
22	33.6	21.3	97	63	0	3	------	☊² ≣° a,
23	32.3	23.2	94	74	0	3	------	☊ a. ⊤ p.
24	33.7	21.9	98	61	0	1	------	☊² ≡ a.
25	33.3	22	94	63	0	1	------	☊ a.
26	32.7	22.2	96	61	2	2	------	☊ a.
27	34.2	21.2	95	53	0	2	------	☊ ≣° a.
28	33.8	20.4	96	58	0	0	------	☊² ≣° a.
29	34.1	19.4	97	57	0	3	------	☊² ≣ a.
30	34.9	20	95	55	0	1	------	☊² ≣° a.
31	32.2	20.1	88	72	1	7	------	↙° p.
Mean	32.1	22.1	94.9	67.3	3.8	4.5	------	
Total	------	------	------	------	------	------	86.5	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.1	25	92	81	10	9	10.2	◠ ° a. ● p.
2	28.5	24.9	94	81	10	9	1.8	d ◠ a. d° ≲ p.
3	27.8	24.6	92	84	10	10	16.2	◠² ↙° ● a. d a. p.
4	27.4	25	89	93	10	10	88.4	↙° ● a. ⌐≲ ●² p.
5	29	24.4	93	85	10	10	1.3	⊤° ≲° ● p.
6	29.6	23.8	94	85	10	10	------	p° a. ≲° p.
7	30.2	24.9	93	80	8	4	1.2	d° p.
8	28.8	25.4	89	81	6	10	1.9	● a.
9	28.2	25.5	78	76	9	9	------	◯° p.
10	28.2	24.1	79	74	8	6	------	
11	27.8	23.1	80	72	7	7	2.2	
12	27.5	22	79	68	9	4	------	● a.
13	27.6	23.3	70	60	3	3	------	
14	27.7	23.3	74	67	3	4	------	p° a.
15	28.5	23.3	77	64	2	2	------	☊ p.
16	27.4	20.4	79	68	0	1	------	☊ a. p.
17	27.4	20.3	82	60	4	2	------	☊ p.
18	28.7	20.7	80	57	4	0	------	
19	28	21	82	75	2	3	------	v a. ☊ p.
20	28.6	19.4	84	80	0	3	------	☊ a.
21	27.8	23.8	85	79	4	8	------	☊ p.
22	27.8	22.5	93	75	2	4	------	
23	29.7	21.9	90	72	2	2	------	v a. ☊² p.
24	28.4	20.8	89	73	1	2	------	☊ a. ☊² p.
25	29.2	21.7	89	77	2	4	2	☊ p° a. ● p.
26	27.7	23.3	77	81	7	8	8.1	p° ●° p.
27	27.8	22.4	76	70	2	0	------	☊ p.
28	28.7	20.3	79	72	3	3	------	
29	28.6	23.8	81	74	3	4	------	
30	28.5	24.7	81	70	7	7	.5	◠° d° a. d p.
31	27.9	24.4	77	73	4	6	------	
Mean	28.4	23	83.8	74.4	5.2	5.3	------	
Total	------	------	------	------	------	------	133.8	

SEISMOLOGICAL BULLETIN FOR OCTOBER, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

3, $4^h\ 28^m$. **Nueva Caceres** (Camarines). Oscillatory earthquake. Direction E–W, intensity III, duration 7 seconds. Repeated with intensity IV at $4^h\ 35^m\ 15^s$.* These two shocks were the forerunners of a series of quakes which were felt in Camarines Province in the course of the day. Luckily they failed to develop sufficient force to produce more serious effects than a general scare lest there be a recurrence of destructive disturbances like those of 1907.

3, $5^h\ 17^m\ 27^s$.* **Southeastern Luzon.** Earthquake of intensity V, which was felt throughout southeastern Luzon, comprising the Provinces of Sorsogon, Albay, Camarines, Tayabas, and the eastern part of Laguna, and having a total length of about 350 kilometers in the direction ESE–WNW. The notices received place the epicenter east-southeast of, and not far from the town of Nueva Caceres, within the seismotectonic line which seems to be indicated by the depression in which flow the Rivers Bicol and Quinali.[2] The meizoseismic area of this principal quake probably extended as far as 80 kilometers from Nueva Caceres toward southeast. Within this same region the following disturbances were likewise perceptible: $5^h\ 26^m$, earthquake of intensity III; $12^h\ 5^m$, intensity II; $12^h\ 52^m\ 30^s$,* intensity IV, duration 6 seconds; $13^h\ 29^m\ 4^s$,* intensity IV, duration 8 seconds; $16^h\ 38^m$, intensity II.

Of the eight earthquakes felt in Camarines Province, four were registered at Manila Observatory, situated at a distance of some 280 kilometers from the epicenter. At the other observatories in the Far East only the principal quake was registered, while the seismographs of Europe appear to have responded only to the slow waves of this same quake, which reached them between $6^h\ 3^m$ and $6^h\ 7^m$.

6, $17^h\ 17^m$. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity III and long duration.

6, $22^h\ 30^m$. **Cotabato** (SW of Mindanao). Earthquake of intensity III, felt throughout the region east and northeast of Illana Bay.

7, $3^h\ 1^m\ 13^s$.* **Camarines** (SE of Luzon). Oscillatory earthquake. Direction SE–NW, intensity III, duration 6 seconds.

7, $4^h\ 5^m$. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity III.

7, $18^h\ 32^m\ 35^s$.* **Tuguegarao** (NE of Luzon). Earthquake of intensity III. To judge from the seismograms obtained at Manila and Baguio, the epicenter was situated near the Central Cordillera.

8, $8^h\ 34^m$. **Sumay** (Guam, Ladrones Islands). Earthquake of force IV and 7 seconds' duration. There were two distinct series of shocks, followed by subterranean noise.

10, $11^h\ 45^m$. **Sarangani** (S of Mindanao). Fair heavy shock.

18, $3^h\ 43^m$. **Northeastern Mindanao.** Earthquake of intensity IV, felt in the Surigao Penin-

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

[2] See "The Earthquake of Ambos Camarines (November 24, 1907)"—Monthly Bulletin, November, 1907.

sula and the northern part of the Agusan Valley. The place of origin appears to have been the eastern part of Butuan Bay.

18, 20h 15m. **Tacloban** (NE of Leyte). Oscillatory earthquake. Direction W–E, intensity III.

22, 16h 30m. **Sarangani** (S of Mindanao). Fair heavy shock.

25, 9h 41m 31s.* **Legaspi** (SE of Luzon). Oscillatory earthquake. Direction NNW–SSE, intensity III, duration 4 seconds. The origin lay near Mount Mayon, and the disturbance was perceptible only in the towns nearest to the volcano.

25, 19h. **Sarangani** (S of Mindanao). Light shock.

28, 15h 5m. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity III.

30, 20h. **Sarangani** (S of Mindanao). Light shock.

31, 9h 30m. **Legaspi** (SE of Luzon). Oscillatory earthquake of intensity II.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight=0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
155	3	I_v	V.	4 35 15	----------	4 35 40	4 36 18	0.05	2.4	4 39	Vertical component 0.01 mm. Earthquake, III at Nueva Caceres (SE of Luzon).
156	3	II_v	V.	5 17 27	----------	5 17 54	5 18 38	1.60	2.4	6 16	V. C. 0.78 mm. Eqke., V southeastern part of Luzon.
			H. NNW	5 17 30	----------	5 17 56	5 19 06	2	6.6	6 20	
			H. WSW	5 17 30	----------	5 17 56	5 21 07	2.35	8.4	6 20	
157	3	I_v	V.	12 52 30	----------	12 52 57	12 53 48	.40	2.4	13 08	V. C. 0.26 mm. Eqke., IV southeastern part of Luzon.
			H. NNW	12 52 31	----------	12 52 59	12 53 57	.46	7.2	13 08	
			H. WSW	12 52 31	----------	12 53 00	12 54 04	.42	7.5	13 15	
158	3	I_v	V.	13 29 04	----------	13 29 33	13 30 19	.12	2.4	13 38	V. C. 0.05 mm. Eqke., IV southeastern part of Luzon.
159	5	I_v	V.	7 20 14	----------	----------	----------	------	------	8 02	
			H. NNW	7 20 14	----------	----------	----------	------	------	8 07	
			H. WSW	7 20 14	----------	----------	----------	------	------	8 09	
160	5	I_d	V.	10 29 11	----------	10 29 22	10 29 26	.09	2.4	10 32	V. C. 0.03 mm.
161	7	I_d	V.	3 01 13	----------	3 01 27	3 01 35	.02	2.4	3 04	Eqke., III at Nueva Caceres (SE of Luzon).
162	7	I_v	V.	18 32 35	----------	18 33 06	18 33 29	.36	2.4	18 43	V. C. 0.04 mm. Eqke., III at Tuguegarao (NE of Luzon).
			H. WSW	18 32 35	----------	18 33 06	18 34 31	.07	4.8	18 42	
163	14	I_d	V.	8 15 43	----------	8 16 01	8 16 03	.09	2.2	8 19	V. C. 0.05 mm.
164	15	I_d	V.	13 35 58	----------	13 36 03	13 36 17	.07	2.4	13 39	V. C. 0.03 mm.
165	18	I_d	V.	2 14 15	----------	2 14 41	2 14 44	.04	2.4	2 17	V. C. 0.01 mm.
166	20	I_d	V.	15 34 58	----------	15 35 20	15 35 22	.08	2.4	15 39	V. C. 0.04 mm.
167	24	I	V.	12 47 06	----------	----------	----------	------	------	13 09	V. C. 0.01 mm.
			H. NNW	12 47 06	----------	----------	----------	------	------	13 10	
			H. WSW	12 47 06	----------	----------	----------	------	------	13 20	
168	24	I	V.	15 42 51	----------	----------	----------	------	------	16 00	
			H. NNW	15 42 51	----------	----------	----------	------	------	16 01	
			H. WSW	15 42 51	----------	----------	----------	------	------	16 07	
169	25	I_v	V.	9 41 31	----------	9 42 07	9 42 22	.01	2.4	9 45	V. C. 0.01 mm. Eqke., III at Legaspi (SE of Luzon).
170	26	I_d	V.	7 52 17	----------	7 52 36	7 52 55	.30	2.4	8 00	
			H. WSW	7 52 18	----------	7 52 37	----------	------	------	8 01	
171	29	I_d	V.	22 27 57	----------	22 28 11	22 28 33	.02	2.4	22 31	V. C. 0.01 mm.
172	30	I_d	V.	10 26 26	----------	10 26 52	10 26 57	.10	2.4	10 30	V. C. 0.03 mm.

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=11.8 seconds; WSW–ENE pendulum, T=8.8 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

3, 4^h 28^m. **Nueva Cáceres** (Camarines). Temblor oscilatorio. Dirección E–W, intensidad III, duración 7 segundos. Repitió con intensidad IV á 4^h 35^m 15^s.* Estos dos temblores fueron las sacudidas precursoras de una serie de temblores sentidos este día en Camarines, los cuales afortunadamente no llegaron á causar más que alarma y temor de que no sobreviniesen otros destructores como los de 1907.

3, 5^h 17^m 27^s.* **SE de Luzón.** Temblor de tierra de intensidad V. Fué sentido en toda la parte SE de la Isla de Luzón, que comprende las Provincias de Sorsogón, Albay, Camarines, Tayabas, y la parte oriental de la Laguna, y representa una extensión aproximada de 350 kilómetros en la dirección ESE–WNW. El epicentro, según notas recibidas, se hallaba ESE y á poca distancia de la población de Nueva Cáceres, en la línea seismotectónica que parece estar indicada por la depresión por donde corren los Ríos Bicol y Quinali.[2] El área meizoséismica de este terremoto principal y en la que fueron perceptibles los otros temblores que le siguieron, se extendía probablemente unos 80 kilómetros desde Nueva Cáceres hacia el SE. Dichos temblores tuvieron lugar en las horas siguientes: 5^h 26^m, temblor de intensidad III; 12^h 5^m, temblor de intensidad II; 12^h 52^m 30^s,* temblor de intensidad IV, duración 6 segundos; 13^h 29^m 4^s,* temblor de intensidad IV, duración 8 segundos; y 16^h 38^m, temblor de intensidad II.

De los ocho temblores sentidos en Camarines, cuatro fueron registrados en el Observatorio de Manila, situado á unos 280 kilómetros del epicentro. En los otros Observatorios del extremo Oriente sólo se registró el principal; los seismógrafos de Europa parece que solamente registraron las ondas lentas del mismo desde 6^h 3^m á 6^h 7^m.

6, 17^h 17^m. **Talacogon** (Valle del Agusan, Mindanao). Temblor de tierra de intensidad III y de larga duración.

6, 22^h 30^m. **Cotabato** (SW de Mindanao). Temblor de tierra de intensidad III, sentido en toda la parte E y NE de la Bahía Illana.

7, 3^h 1^m 13^s.* **Camarines** (SE de Luzón). Temblor oscilatorio. Dirección SE–NW, intensidad III, duración 6 segundos.

7, 4^h 5^m. **Talacogon** (Valle del Agusan). Temblor de tierra de intensidad III.

7, 18^h 32^m 35^s.* **Tuguegarao** (NE de Luzón). Temblor de tierra de intensidad III. El epicentro, á juzgar por los seismogramas de Manila y de Baguio, se hallaba cerca de la cordillera central.

8, 8^h 34^m. **Sumay** (Isla de Guam, Islas Ladrones). Temblor de tierra de intensidad IV, duración 7 segundos. Distinguiéronse dos series de choques diferentes, seguidos de ruido subterráneo.

10, 11^h 45^m. **Sarangani** (S de Mindanao). Temblor de tierra de intensidad IV.

18, 3^h 43^m. **NE de Mindanao.** Temblor de tierra de intensidad IV, sentido en la Península de Surigao y parte N del valle del Río Agusan. El epicentro parece se hallaba en la parte oriental de la Bahía de Butuan.

18, 20^h 15^m. **Tacloban** (NE de Leyte). Temblor oscilatorio. Dirección W–E, intensidad III.

22, 16^h 30^m. **Sarangani** (S de Mindanao). Temblor de tierra de intensidad IV.

25, 9^h 41^m 31^s.* **Legaspi** (SE de Luzón). Temblor oscilatorio. Dirección NNW–SSE, intensidad III, duración 4 segundos. El origen se hallaba en las cercanías del Volcán Mayón, y solo fué perceptible en los pueblos más próximos al volcán.

25, 19^h. **Sarangani**(S de Mindanao). Temblor de tierra de intensidad III.

28, 15^h 5^m. **Talacogon** (Valle del Agusan, Mindanao). Temblor de tierra de intensidad III.

30, 20^h. **Sarangani** (S de Mindanao). Temblor de tierra de intensidad III.

31, 9^h 30^m. **Legaspi** (SE de Luzón). Temblor oscilatorio, de intensidad II.

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[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120 E de Greenwich.

[2] Véase "El Terremoto de Ambos Camarines (24 de Noviembre, 1907)"—Monthly Bulletin, November, 1907.

BULLETIN FOR NOVEMBER, 1910.

METEOROLOGICAL BULLETIN FOR NOVEMBER, 1910.

By Rev. José Coronas, S. J.,
Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—Except a few in northern Luzon, all the stations of the Weather Bureau report for the month of November a mean of atmospheric pressure slightly below the corresponding value for the same month of the preceding year. Were we to compare the monthly means with the normal for November, we would find still greater differences, all of them negative. This is due to the relatively large number of atmospheric disturbances which, as we shall see presently, influenced the Philippine Archipelago during the month. As regards Manila, the monthly mean pressure differed from the normal for the month by —1.32 millimeters and from the mean for November, 1909, by —0.13 millimeter.

The monthly mean of temperature differs barely from that for November of last year, as the largest departures, those of Aparri and Tuguegarao, amounted only to —0.6° C. and —0.4° C., respectively.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR NOVEMBER, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from November, 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from November, 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran[1]	756.64		757.97	7	751.38	1	26.9	0			21.7	11
Surigao	57.03	—0.65	58.26	7	52.86	1	25.9	—0.1	32	13	21.5	11
Cebu	56.98	— .58	58.28	18	50.34	1	26	— .3	31.3	15	21.8	11
Iloilo	57.27	— .61	58.61	18	49.30	1	26.1	0	32	3	22.4	11, 29
Ormoc	57.17	— .48	58.83	7	47.71	1						
Tacloban	57.96		59.35	6	49.99	1	26.1		33.4	18	22	1, 27
Capiz	57.27		58.80	7	48.93	1	26.6	+ .2	32.7	14	22	1
Calbayog	57.66	— .41	59.11	7	51.86	1	25.5	— .3	33.3	7	21.2	29
Legaspi	57.51	— .50	58.92	7	53.88	1	26.3	— .2	32.2	12	20.8	10
Atimonan	57.85	— .25	59.24	27	53.73	22	26.5	+ .1	32.8	3	20.8	22
Paracale	57.93		59.31	7	53.46	22	26.3		31.4	15	21.7	10
Manila	58.01	— .13	59.48	5	54.77	14	25.6	— .2	33.2	3	20.4	22
San Isidro	57.95	— .22	59.32	27	55.04	22	25.4		32.4	1	21	5, 6, 26, 27
Dagupan	57.71	— .25	59.05	30	54.96	14	26.6	— .1	34.7	16	20.5	29
Bolinao	57.56	— .22	58.90	30	54.83	14	26.8	0	34	8, 15	20	30
Baguio[2]	635.83	— .21	637.07	7	633.44	22	18.1	+ .3	23.9	21	13.5	29
Vigan	757.99	— .16	759.72	18	755.20	14	26.7	— .3	36.5	2	20.8	30
Tuguegarao	59.40	+ .01	61.16	18	57.26	14	25	— .6	33.7	8	19.5	29
Aparri	60.05	+ .12	62.60	18	57.54	15	25	— .4	31.5	9	21.2	12, 28

[1] The barometric readings of this station seem to be too low.
[2] The barometric readings of this station are not reduced to sea level.

Precipitation.—Despite the frequency of depressions already mentioned, the rainfall was, as a rule, less abundant than during the same month of 1909. Some stations, however, as, for instance, Manila, show an amount in excess of that of last year's November and likewise of the normal quantity for the month.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF NOVEMBER, 1910.

Station.	Total.	Departure from November, 1909.	Rainy days.	Departure from November, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from November, 1909.	Rainy days.	Departure from November, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Jolo	[1]465.4	+214.7	20	— 4	66.6	5	Calapan	491	— 95.8	26	+ 7	88.9	17
Isabela, Basilan	335.1	+157	22	+ 3	54.3	10	Virac	387.6	------	26	------	68.3	1
Zamboanga	238.7	+113.1	18	+ 5	62.2	13	Nueva Caceres	528.6	+ 206	20	+ 1	157.8	21
Davao	166	— 19.6	10	+ 1	23.6	8	Batangas	360	+ 91.4	19	+ 1	97.1	22
Cotabato	297	+ 39.5	24	+ 5	51.3	10	Atimonan	465.9	+ 30.3	26	+ 5	87.1	22
Dapitan	344.7	— 84.5	22	0	74.7	8	Silang	314.6	— 8.3	15	+ 3	62.2	22
Butuan	252.2	—333	24	0	42.2	10	Paracale	695.7	----------	26	------	132	21
Dumaguete	256.2	--------	18	------	64.3	8	Santa Cruz, La Laguna	380.3	----------	22	------	101.9	22
Yap, W. Carolines	257.3	— 77.1	21	— 7	42.4	7	Antipolo	210.1	----------	23	------	50.5	22
Tagbilaran	213.7	— 67.9	20	+ 2	48	1	Manila	184.7	+ 48.4	25	+ 6	32.9	18
Surigao	693.9	+228	25	+ 6	204.2	28	Iba	22.1	----------	7	------	13.9	14
Maasin	728.6	+384.6	17	+ 5	143.5	28	San Isidro	120	+ 8.7	18	+ 2	35.8	14
Cebu	249.3	— 40	17	— 3	49.5	1	Tarlac	81.1	— 87.3	13	+ 3	19	2, 22
Iloilo	460.5	+ 80.7	20	— 3	128.6	1	Dagupan	22.5	— 22	9	0	6.6	10
San Jose Buenavista	[2]270.2?	--------	19	— 1	118.4?	1	Bolinao	21.7	— 51.7	9	— 1	6.4	2
Cuyo	452.4	--------	15	------	269.2	1	Baguio	73	— 8.3	16	+ 8	19.3	12
Ormoc	279.5	—145.1	22	+ 2	39.9	1	San Fernando, Union	35.5	— 47.7	3	+ 4	22.6	16
Tacloban	363.5	— 6.5	23	+ 3	132.1	1	Echagüe	439.6	+ 251.5	27	+ 4	68.6	16
Capiz	[2]263.2?	--------	22	------	------	------	Candon	31.8	— 42.5	6	— 2	21.6	17
Borongan	421.4	—413.9	27	+ 3	105.4	1	Vigan	41.1	— 3.2	4	— 1	37.5	17
Calbayog	383.2	— 16.5	24	0	122.2	1	Tuguegarao	441.5	+ 135.2	16	+ 4	170.2	17
Masbate	186.8	--------	20	------	73.2	1	Laoag	73.2	+ 31.3	8	+ 4	43.7	17
Legaspi	536.8	— 29.3	24	0	297.4	1	Aparri	607.4	+ 3.7	21	+ 1	287.7	17
Romblon	341.3	—295.9	21	— 3	67.3	1	Santo Domingo, Batanes Is.	339.9	— 370.8	21	— 2	58.2	15
Sumay, Guam	172.3	— 24.5	22	— 2	57.1	2							

[1] 28 days of observation only.

[2] The rain gauge was blown down by hurricane winds on November 1.

DEPRESSIONS AND TYPHOONS.

During the month one well-developed typhoon of great intensity and two rather unimportant depressions traversed the Philippine Archipelago. Besides, the observations made at Guam, Yap, and Palau (Pelew Islands) indicate several other depressions over the Pacific Ocean, two of which appeared over Mindanao on November 4 and 7, respectively, as low-pressure areas, while another recurved northward in the Pacific without approaching closely to the Philippines. The approximate tracks of the latter and of the three disturbances mentioned first will be published, together with those of atmospheric disturbances during December, in the Bulletin corresponding to the latter month.

THE TYPHOON OF THE VISAYAN ISLANDS, OCTOBER 26 TO NOVEMBER 5, 1910.

This typhoon formed probably on October 26, in the vicinity of the Western Carolines. The observations of Guam, Yap, and Palau for the 26th and 27th give clear indications of its existence, but are not sufficiently conclusive to allow of determining the first part of its track with more than a fair degree of probability.

In the morning of October 28 and 29, Manila Observatory sent the following notices to the observatories of Tokyo, Zikawei, Taihoku, Hongkong, and Phulien:

October 28, 8.25 a. m.: Typhoon south of Yap, Western Carolines, moving west.
October 29, 9 a. m.: Typhoon north of the Pelew Islands, inclining northward.

The meteorological stations in the Philippines gave no clear indications of the approaching typhoon until the afternoon of the 30th, when a general falling of the barometers in the Archipelago became evident, with marked slope toward the region east of the Visayas and winds from southwest in Mindanao and from the northern quadrants in the Visayas and Luzon.

As soon as the weather map for 2 p. m. of the 30th had been drawn, the following cablegram was dispatched to the aforementioned observatories:

October 30, 5.15 p. m.: Typhoon east of the northern Visayas or southeastern Luzon, moving west-northwest or northwest.

In the morning of the 31st, there could be no longer any doubt that the typhoon threatened the Visayan Islands and advanced with a strong westerly inclination. At 6.30 p. m. of that day the vortex entered Samar Island south of, and very close to, Borongan, where the barometer fell to 732 millimeters and the winds blew with hurricane force from the first and second quadrants for several hours.

The following table contains the observations made at Borongan during the passage of the storm. Rather surprising is the extraordinary circumstance that five minutes of relative calm have been observed, not at the time of the barometric minimum, but three hours after it, when the pressure had again risen some 8 millimeters. As this singular phenomenon is recorded as well in the observations as in the report on the typhoon which the observer in charge of the station sent, it would seem that the fact can not be questioned. We content ourselves with mentioning it, without attempting for the present an explanation of this curious anomaly.

METEOROLOGICAL OBSERVATIONS AT BORONGAN, OCTOBER 31 AND NOVEMBER 1, 1910.

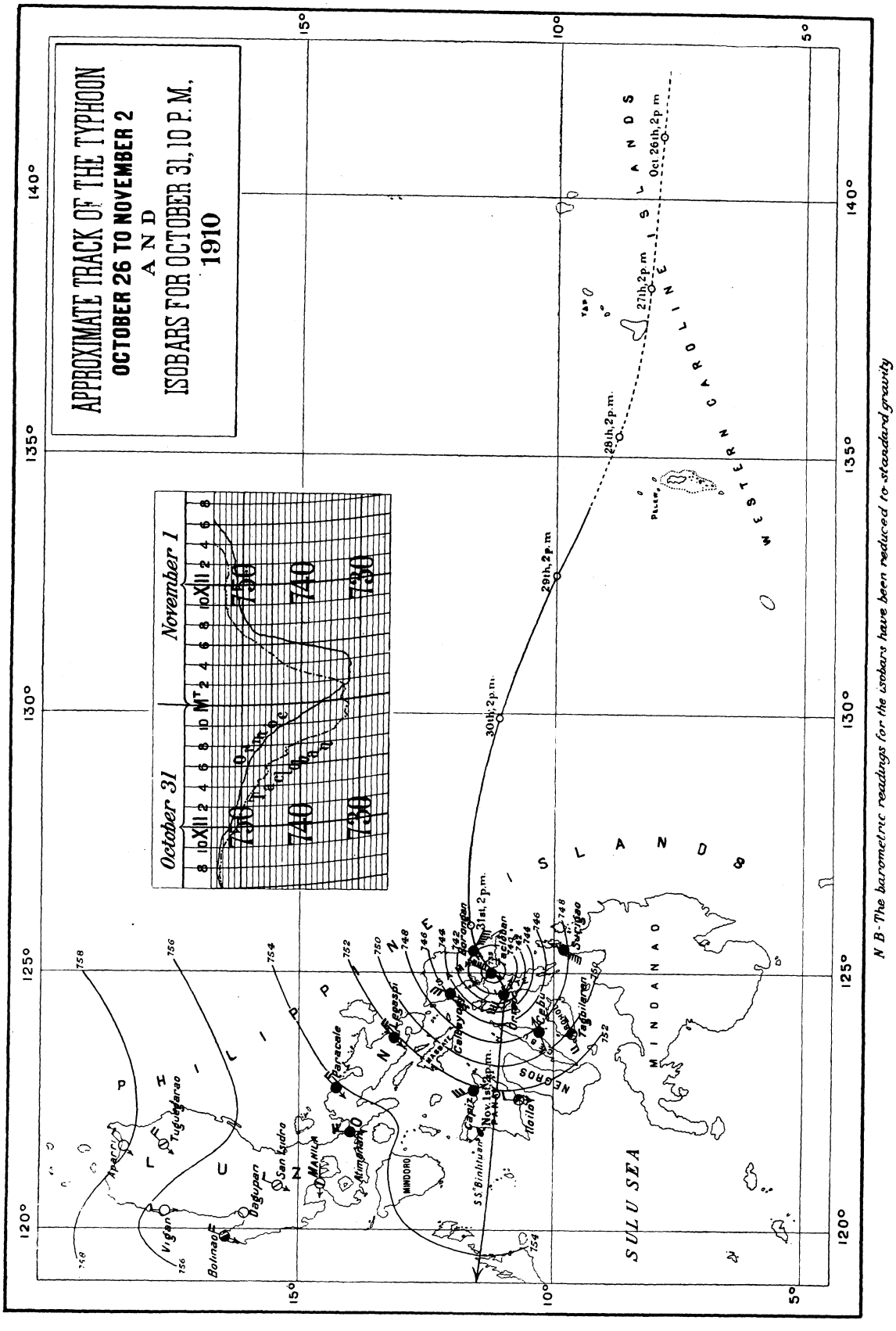
Date and hour.	Pressure.	Wind.		Date and hour.	Pressure.	Wind.		Remarks.
		Direction.	Force.			Direction.	Force.	
October 31:	*mm.*		*0–12.*	October 31:	*mm.*		*0–12.*	
6 a. m	753.02	N	3	6.30 p. m	732	NNE	11	
8 a. m	53.24	N	5	7 p. m	32.40	NNE	11	
10 a. m	53.11	N	6	7.30 p. m	33.53	NNE	12	
11 a. m	49.68	NNW-NW	7	8 p. m	35.40	NNE	12	
Noon	49.38	NNW-NW	7	8.30 p. m	37.10	NE-ENE	12	
1 p. m	48.08	NNW-NW	8	9 p. m	38.05	E-ENE	12	
2 p. m	46.39	NNW-NW	9	9.30 p. m	40.10	E	2	Light winds from E for about 5 minutes.
2.30 p. m	45	NNW-NW	9	10 p. m	42.50	ESE	12	Heavy thunderstorm extending from W to SE through S.
3 p. m	44.52	NNW-NW	9	10.30 p. m	44.30	ESE	12	
3.30 p. m	44.31	NNW-NW	9	11 p. m	45.10	ESE	12	
4 p. m	44	NNW-NW	9	11.30 p. m	45.80	ESE	12	
4.30 p. m	40	NNW-NW	10	Midnight	46.10	ESE	12	
5 p. m	39.20	NNW-NW	10	November 1:				
5.30 p. m	37.10	NNW-NW	10	6 a. m	49.66	SE	8	
6 p. m	35	N	11	2 p. m	55.61	SE	8	

The towns of Tacloban and Ormoc came successively to lie within the vortex; the former at 0.30 a. m., the latter at 3 a. m. of November 1, as is shown by the observations embodied in the two following tables. From the geographical positions of Borongan, Tacloban, and Ormoc it is evident that the storm crossed Samar and Leyte Islands on a southwestern course, as shown on Plate XVI, a direction which is indeed exceedingly rarely observed in our Archipelago.

METEOROLOGICAL OBSERVATIONS AT TACLOBAN, OCTOBER 31 AND NOVEMBER 1, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Remarks.
			Direction.	Force.		
October 31:	*mm.*	*mm.*		*0–12*	*mm.*	
6 a.m	753.01	— 5.07	NW	6	-------	Squally.
10 a.m	52.98	— 5.54	NW	3	-------	Drizzle with gentle breeze.
2 p.m	49.58	— 5.90	W	4	-------	Rainy with moderate breeze.
4 p.m	47.62	— 7.71	WNW	10	-------	Whole gale blowing.
6 p.m	46.01	— 9.26	NW	12	-------	Hurricane.
6.30 p.m	43.94	---------	WNW	10	-------	Whole gale.
7 p.m	42.10	—13.32	W	7	-------	Moderate gale.
7.30 p.m	42.31	---------	WNW	10	-------	Whole gale.
8 p.m	41.01	—14.56	NW	12	-------	Fierce hurricane.
8.30 p.m	38.88	---------	NNW	12	-------	Do.
9 p.m	35.27	—20.15	NNW	12	-------	Do.
9.30 p.m	34.05	---------	NNW	10	-------	Whole gale.

Plate XVI.



N B-The barometric readings for the isobars have been reduced to standard gravity

METEOROLOGICAL OBSERVATIONS AT TACLOBAN, OCTOBER 31 AND NOVEMBER 1, 1910—Continued.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Remarks.
			Direction.	Force.		
October 31:	*mm.*	*mm.*		*0–12*	*mm.*	
10 p.m	33.24	—22.03	NNE	12		Fierce hurricane; wind veered to NNE.
10.30 p.m	32.16		W	4		Wind lulled.
11 p.m	32.48	—22.59	NNW	1		Light airs.
11.30 p.m	31.98		NNE	1		Light airs and lowest barometric reading.
Midnight	32.82	—21.61	E	1	69.1	Light airs.
November 1:						
12.30 a.m	33.02		Calm			Dead calm.
1 a.m	32.57	—21.14	NNE	4		Moderate winds begin to blow again with heavy rain.
2 a.m	34.34	—18.97	E	12		Hurricane.
4 a.m	42.99	— 9.87	ESE	8		Fresh gale.
6 a.m	47	— 6.01	ESE	8		Fresh gale and squally.
8 a.m	51.25	— 2.36	S	7		Strong wind; from 8.10 to 8.20 a.m. hurricane.
10 a.m	52.83	— .15	SE	6		Squalls with strong wind.
2 p.m	52.61	+ 3.03	SSE	5		Fresh breeze.
6 p.m	55.40	+ 9.39	S	2	132.1	Continuous rain with light breeze.

METEOROLOGICAL OBSERVATIONS AT ORMOC, OCTOBER 31 AND NOVEMBER 1, 1910.

Date and hour.	Pressure.	Difference in 24 hours.	Wind.		Rainfall (daily total).	Remarks.
			Direction.	Force.		
October 31:	*mm.*	*mm.*		*0–12.*	*mm.*	
2 a. m	753.95	— 3.47	Calm			
6 a. m	53.09	— 4.64	N	0		
10 a. m	53.36	— 4.37	N	2		Rainy.
Noon	51.92		NNW	1		Drizzling; veil of cirrus.
2 p. m	50.69	— 4.02	NW	1		Rainy.
4 p. m	50.09		NW	1		Drizzle at times.
6 p. m	48.94	— 5.98	NW	2		Rainy.
8 p. m	46.70		W	6		Drizzling.
9 p. m	45.60		WNW	6		Do.
10 p. m	42.53	—12.94	WNW	8		Heavy rain squalls.
11 p. m	39.65		NW	8		Do.
11.35 p. m	37.56		WNW	9		Do.
Midnight	36.77		NW	9	98.5	Do.
November 1:						
12.20 a. m	35.42		W	9		Do.
1 a. m	33.47		NW	9		Do.
1.30 a. m	31.97		WNW	5		Do.
2 a. m	32.07	—21.88	NW	3		Heavy rain squalls, and lightning in the NE quadrant.
2.30 a. m	31.86		NW	2		From 2.40 to 3.30 a. m. relative calm, during which there was a period of dead calm for about 6 minutes. During the latter some stars became faintly visible overhead, and instantaneous glimpses of clear sky were observed in the eastern quadrants. The lowest barometer reading 731.57 mm. occurred at 3.30 a. m.
3 a. m	31.83		NW	0		
3.15 a. m	31.70		E	0		
3.30 a. m	31.57		SE	1		
4 a. m	31.92		S	4		
4.30 a. m	32.47		S	6		
5 a. m	34.52		S	12		Continuous rain and drizzle with hurricane wind from SE to S.
5.20 a. m	36.91		SE	12		Do.
6 a. m	40.73	—12.36	SE	12		Do.
6.30 a. m	43.24		SE	12		Do.
7 a. m	47.91		SE	10		
8 a. m	49.02	— 4.90	SEbyS	9		
9 a. m	49.81	— 4.02	SEbyS	7		
10 a. m	50.88	— 2.48	SE	2		
2 p. m	51.27	+ .58	SE	2		
10 p. m	56.73	+14.20	SE	1	39.9	

From Ormoc the storm took a westerly direction, crossing the northern end of Cebu Island and the central part of Panay. For the sake of brevity we omit the enumeration of the extensive damages caused by the typhoon all along its path, in southern Samar, in northern Leyte, Cebu, and Negros, throughout nearly the whole Island of Panay, and on Cuyo and Culion Islands.

During the 2d and 3d, the typhoon crossed the China Sea, moving toward W by N, and penetrated into Indo China at about 5 p. m. of the 3d. Once within the continent, it recurved toward north and northeast, re-entered the China Sea to the northwest of Tourane, and filled up, it would seem, south of Hainan in the evening or during the night of the 5th.

Plates XVI and XVII show the track of this typhoon in two parts. The former contains also the distribution of isobars in the Philippines at 10 p. m. of October 31 and the barograph curves obtained at Tacloban and Ormoc, while the latter shows the isobars for Indo China and southern China at 10 a. m. of November 4.

In addition to the typhoon warnings already mentioned, Manila Observatory cabled to its foreign correspondents the following notices:

October 31, 9 a. m.: Typhoon east of the northern Visayas or southeastern Luzon, moving west-northwest.
October 31, 11.30 a. m.: Typhoon east of the Visayan Islands, moving west or west-northwest.
October 31, 4.45 p. m.: Typhoon over the eastern Visayas, moving west.
November 1, 10 a. m.: Typhoon over the Visayan Islands, moving west.
November 2, 9.50 a. m.: Typhoon west of northern Palawan, moving west.

With reference to the same typhoon, the following cablegrams were received from Hongkong Observatory:

October 31, noon: Typhoon southeast of Luzon, moving west-northwest.
November 1, 10.40 a. m.: Typhoon south of Luzon, moving west.
November 2, 11.30 a. m.: Typhoon northwest of Palawan, moving west.
November 3, 12.30 p. m.: Typhoon southeast of Paracels, moving west-northwest.

The subjoined advices were issued by Zikawei Observatory to the stations of the China coast.

October 28, 4.45 p. m.: Typhoon over the Caroline Islands, moving northwest.
October 29, 10 a. m.: Typhoon far to the east of Philippine Islands, moving WNW or WbyN.
October 29, 9 p. m.: Typhoon far to the east of Philippine Islands, moving northwest.
October 30, 9 p. m.: Typhoon southeast of Luzon, moving northwest.
November 2, 11.30 a. m.: Typhoon southwest of Luzon, moving west.
November 3, 9 a. m.: Typhoon south of Macclesfield Bank, moving WNW or WbyN.
November 3, 4.30 p. m.: Typhoon off Tourane (Annam), moving WNW or WbyN.

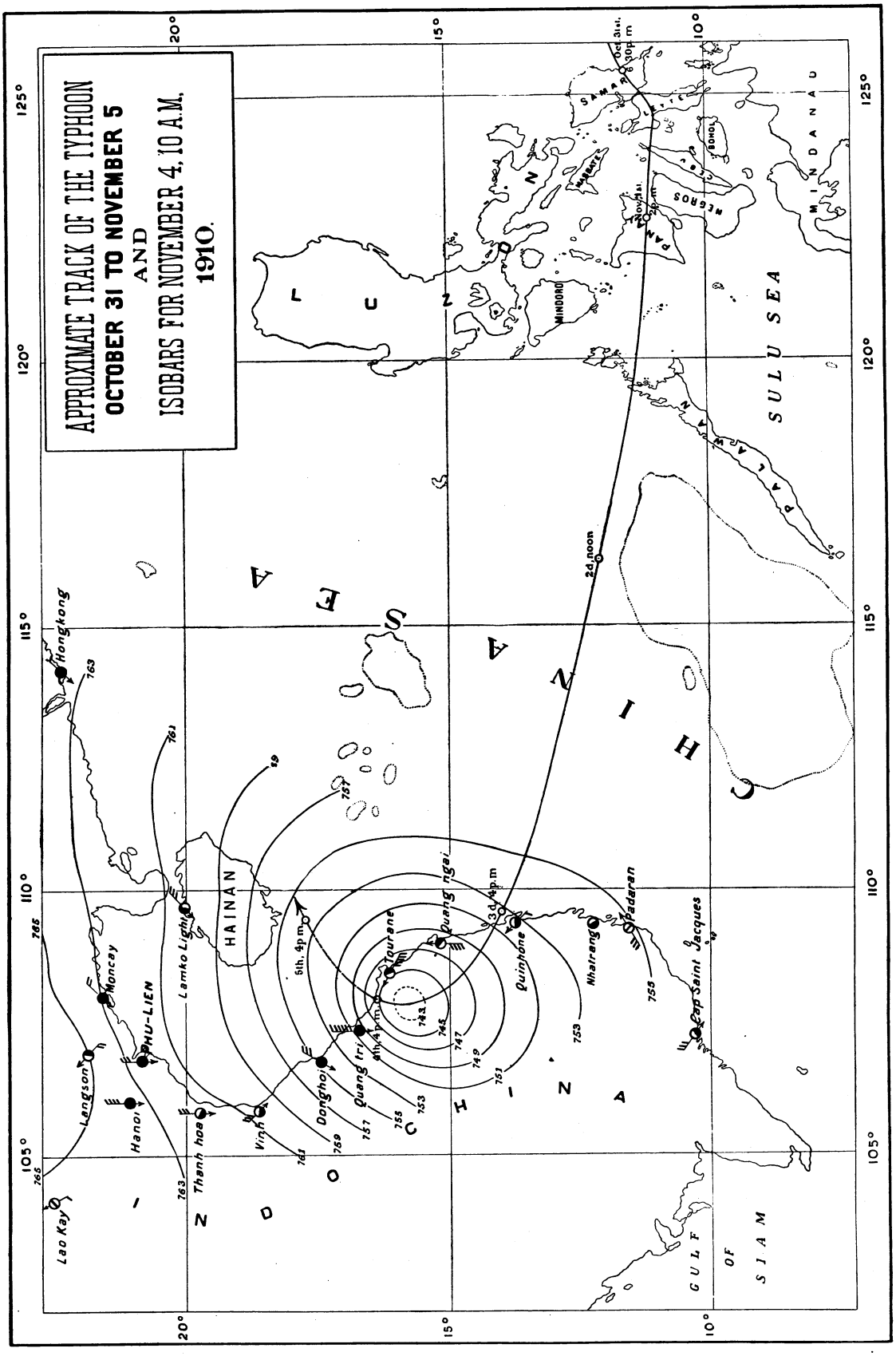
TWO DEPRESSIONS OVER SOUTHERN LUZON, NOVEMBER 13 AND 22, 1910.

A few words may suffice concerning each of the two depressions of November 13 and 22, respectively, especially as they were of very slight importance, at least while they traversed the Philippines.

The first of these appeared in the neighborhood of the Western Carolines on the 6th and 7th of November, passed north of Yap in a WbyN direction during the night of November 8 to 9, and moved westward during the 10th, 11th, and 12th, until it reached Catanduanes Island in the afternoon of the 13th. From the latter to Marinduque Island the depression moved toward WbyS, and thereafter again toward west, while traversing Mindoro Island and the central part of the China Sea. It seems to have filled up not far from Annam in the evening or during the night of the 17th.

The other depression formed from the 17th to 18th, south of the Western Carolines, passed between Yap and the Pelew Islands on a NWbyW course during the night of the 19th to 20th, and inclined more toward west after the afternoon of the 21st. In the early morning of the 22d it was within Luzon Island, between Nueva Caceres and Paracale, whence it passed north of Atimonan and Manila, and entered the China Sea at about 5 p. m. of the 22d, in the vicinity of parallel 15° latitude north. In the China Sea it continued at first its due west course, but changed later to WbyN, and finally filled up, as it would seem, in the southern part of the Gulf of Tongking, during November 25 and 26.

Plate XVII



N B - The barometric readings have been reduced to standard gravity

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—Si exceptuamos unas pocas estaciones en el norte de Luzón, todas las demás nos dan para este mes una media de la presión atmosférica algo inferior á la de Noviembre del año próximo pasado. Si estas medias mensuales se comparasen con la normal de Noviembre, hallaríamos ser las diferencias mucho mayores y negativas para todas las estaciones. Esto debe atribuirse naturalmente al número relativamente notable de perturbaciones atmosféricas que se observaron en Filipinas en el decurso del mes, según veremos luego. La media mensual para Manila difiere de la normal de este mes en —1.32 mm. y de la media mensual de Noviembre, 1909, en —0.13 mm.

La temperatura media mensual apenas se diferencia de la del año pasado, siendo las diferencias mayores de —0.6° C. y —0.4° C., correspondientes á Aparri y Tuguegarao. Los valores extremos de Manila fueron 33.2° C. y 20.4° C. registrados los días 3 y 22 respectivamente.

Precipitación acuosa.—Á pesar de la frecuencia de depresiones arriba indicada, la lluvia de este mes fué en general menos abundante que en Noviembre de 1909. Sin embargo algunas estaciones, como Manila, por ejemplo, dan una cantidad de lluvia superior así á la del año pasado como á la normal del mes de Noviembre.

DEPRESIONES Y TIFONES.

Durante este mes atravesaron nuestro Archipiélago un tifón bien desarrollado y de mucha intensidad y dos depresiones de poca importancia. Además, las observaciones hechas en Guam, Yap y Palaos indican varias otras depresiones en el Pacífico, de las cuales dos aparecieron sobre Mindanao en forma de áreas de baja presión los días 4 y 7 respectivamente, y otra recurvó al norte en el mismo Pacífico sin acercarse mucho á Filipinas. Las trayectorias aproximadas de las tres primeras y de la última de estas perturbaciones atmosféricas las daremos en una lámina, juntamente con las de Diciembre, en el boletín del mes siguiente.

EL BAGUIO DE VISAYAS, 26 DE OCTUBRE Á 5 DE NOVIEMBRE, 1910.

Este baguio se formó probablemente el 26 de Octubre en los alrededores de las Carolinas Occidentales. Las observaciones de Guam, Yap y Palaos indican bien la existencia de este tifón los días 26 y 27; pero no son bastante concluyentes para que podamos dar á la primera parte de su trayectoria un valor más que algo probable.

El Observatorio de Manila envió á los Observatorios de Tokio, Zikawei, Taihoku, Hongkong y Phulien estos anuncios de tifón la mañana del 28 y 29:

Día 28, 8.25 a. m.: Tifón al S de Yap, Carolinas Occidentales, moviéndose al W.
Día 29, 9 a. m.: Tifón al N de las islas Palaos, inclinándose al norte.

Las estaciones de Filipinas no dieron señales claras de que se acercase este tifón hasta la tarde del día 30, en que se declaró una bajada general de los barómetros en el Archipiélago con pendiente marcada hacia el este de las Visayas y vientos del SW en Mindanao y de los cuadrantes del norte en Visayas y Luzón.

Una vez trazado el mapa del tiempo de 2 p. m. de dicho día 30 se trasmitió este cablegrama á los Observatorios poco ha indicados:

Día 30, 5.15 p. m.: Tifón al E de las Visayas Septentrionales ó de la parte sudeste de Luzón, moviéndose al WNW ó NW.

El día 31 por la mañana no cabía la menor duda de que el tifón se presentaba amenazador para las Islas Visayas y se movía muy inclinado al W. Eran las 6.30 p. m. de dicho día 31 cuando el vórtice penetró en la Isla de Sámar por el sur y muy cerca de Borongan donde bajó el barómetro hasta 732 mm. y los vientos soplaron con fuerza huracanada del 1° y 2° cuadrantes por espacio de varias horas.

Nuestros lectores podrán ver en el texto inglés las observaciones hechas en Borongan durante el paso del baguio. Llama notablemente la atención en estas observaciones el hecho singular de

haberse notado cinco minutos de calma relativa, no al tiempo de la mínima barométrica, sino tres horas después de la mínima, cuando el barómetro había subido ya unos 8 mm. Como este hecho viene consignado así en el cuadro de observaciones como en el report que sobre este baguio remitió el observador de aquella estación; parece que no puede dudarse de lo ocurrido. Nos contentamos, sin embargo, con mencionarlo, sin que sea nuestro ánimo dar al presente ninguna explicación de semejante anomalía.

En el texto inglés damos también las observaciones hechas en Tacloban y Ormoc, estaciones que se hallaron sucesivamente dentro del vórtice: la primera á 0^h 30^m a. m. y la segunda 3 a. m. del 1° de Noviembre. Teniendo á la vista la lámina XVI se echará de ver que, dadas las posiciones geográficas de Borongan, Tacloban y Ormoc, el baguio atravesó las Islas de Sámar y Leyte moviéndose al SW: dirección por cierto rarísimas veces observada dentro de nuestro Archipiélago.

Desde Ormoc volvió á dirigirse el baguio al W viniendo á atravesar la extremidad norte de la Isla de Cebú y la región central de la Isla de Panay. Omitimos en obsequio de la brevedad los muchos destrozos causados por este tifón á lo largo de su trayectoria en el sur de Sámar, norte de Leyte, Cebú y Negros, en casi toda la Isla de Panay, en Cuyo y en Culión.

Durante los días 2 y 3 el baguio cruzó el Mar de China moviéndose al W¼NW; penetró en Indochina á eso de 5 p. m. del 3; y una vez en el Continente recurvó al norte y nordeste, volvió á salir al Mar de China por el NW de Tourane y se deshizo, al parecer, al sur de Hainán la tarde ó noche del día 5.

Véase la trayectoria de este baguio dividida en dos partes en las láminas XVI y XVII. En ellas publicamos también respectivamente las isobaras de Filipinas de 10 p. m. del 31 de Octubre y las de Indochina y sur de China de 10 a. m. del día 4. En la lámina XVI incluímos además las curvas barográficas de Tacloban y Ormoc.

Además de los avisos de tifón mencionados arriba, el Observatorio de Manila envió los siguientes durante los días 31 de Octubre, 1 y 2 de Noviembre:

Octubre, día 31, 9 a. m.: Tifón al E de las Visayas septentrionales ó de la parte sudeste de Luzón, moviéndose al WNW.
Octubre, día 31, 11.30 a. m.: Tifón al E de las Islas Visayas, moviéndose al W ó WNW.
Octubre, día 31, 4.45 p. m.: Tifón cruzando las Visayas orientales, moviéndose al W.
Noviembre, día 1, 10 a. m.: Tifón cruzando las Islas Visayas, moviéndose al W.
Noviembre, día 2, 9.50 a. m.: Tifón al W de la parte norte de Palawan, moviéndose al W.

Del Observatorio de Hongkong recibimos los siguientes telegramas referentes á este tifón:

Octubre, día 31, mediodía: Tifón al SE de Luzón, moviéndose al WNW.
Noviembre, día 1, 10.40 a. m.: Tifón al S. de Luzón, moviéndose al W.
Noviembre, día 2, 11.30 a. m.: Tifón al NW de Palawan, moviéndose al W.
Noviembre, día 3, 12.30 p. m.: Tifón al SE de Paracels, moviéndose al WNW.

El Observatorio de Zikawei anunció también este tifón á las estaciones de la costa de China con estos telegramas:

Octubre, día 28, 4.45 p. m.: Tifón en las Carolinas, moviéndose al NW.
Octubre, día 29, 10 a. m.: Tifón lejos al E de Filipinas, moviéndose al WNW ó W¼NW.
Octubre, día 29, 9 p. m.: Tifón lejos al E de Filipinas, moviéndose al NW.
Octubre día 30, 9 p. m.: Tifón al SE de Luzón, moviéndose al NW.
Noviembre, día 2, 11.30 a. m.: Tifón al SW de Luzón, moviéndose al W.
Noviembre, día 3, 9 a. m.: Tifón al S del banco Macclesfield, moviéndose al WNW ó W¼NW.
Noviembre, día 3, 4.30 p. m.: Tifón en frente de Tourane (Annam), moviéndose al WNW ó W¼NW.

DOS DEPRESIONES EN EL SUR DE LUZÓN, 13 Y 22 DE NOVIEMBRE, 1910.

Diremos solamente dos palabras sobre cada una de estas dos depresiones, ya que fueron de muy poca importancia, al menos mientras cruzaron nuestro Archipiélago.

La primera apareció en los alrededores de las Carolinas Occidentales los días 6 y 7; pasó por el N de Yap moviéndose al W¼NW la noche del 8 al 9; movióse casi al W durante los días 10, 11 y 12 hasta llegar á la Isla de Catanduanes la tarde del día 13; desde Catanduanes hasta Marindu-

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que se dirigió al W¼SW; por fin desde Marinduque se movió otra vez al W atravesando con esta dirección el norte de la Isla de Mindoro y la región central del Mar de China. Parece que se deshizo no lejos de Annam la tarde ó noche del 17.

La otra depresión se formó del 17 al 18 al sur de las Carolinas Occidentales; pasó por entre Yap y Palaos en dirección al NW¼W la noche del 19 al 20; se inclinó más al W desde la tarde del 21; el 22 por la madrugada se hallaba en Luzón entre Paracale y Nueva Cáceres; pasó luego por el norte de Atimonan y de Manila y entró en el Mar de China á eso de 5 p. m. del 22 por los alrededores de 15° Lat. N. Una vez en el Mar de China siguió su curso al W primero y al W¼NW después, hasta deshacerse, según parece, en la parte sur del golfo de Tongking durante los días 25 y 26.

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2]			Underground temperature.						Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2]	
		Mean.	Maximum.	Minimum.	0.25 meter.		0.50 meter.		1.50 meters.	2.50 meters.			Free exposure, total.	Shelter, total.
					8 a. m.	2 p. m.	8 a. m.	2 p. m.	8 a. m.	8 a. m.				
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	755.14	25.9	31.7	23.8	27.9	28.3	28.3	28.3	28.3	28.5	84.7	20.9	2.5	2.9
2	56.82	26.5	29.7	23.9	27.5	28.3	28.1	28.3	28.3	28.4	79	20.2	2	1.9
3	58.76	26.7	33.2	23.2	27.2	28.4	28	28.2	28.3	28.4	85.4	22.1	2.2	1.9
4	59.28	25.6	30.7	23.2	27.8	28.3	28	28	28.2	28.4	88.9	21.6	.9	1
5	59.48	25.8	31.6	21.8	27.7	28.3	28.2	28.2	28.3	28.5	81.8	20	2.4	2.1
6	59.29	25.3	31.7	21.4	27.3	28	28	28.2	28.2	28.3	86.5	20.6	1.5	1.4
7	59.40	26.1	32.4	21.5	27.2	28.1	28	28.2	28.2	28.4	82.7	20.6	2.8	2.1
8	59.04	26.7	32	23	27.4	28.6	28	28.3	28.2	28.4	85.2	22	2.8	1.9
9	58.33	26.9	32.3	22.8	27.8	29.1	28.2	28.4	28.2	28.4	83.8	21.8	2.6	2.1
10	57.23	26.6	32.2	23.8	28.2	29.2	28.4	28.7	28.2	28.5	85.2	22	2.1	1.6
11	57.06	26.3	31.8	23.2	28.2	29.1	28.5	28.7	28.2	28.5	85.1	21.4	1.6	1.8
12	57.65	24.6	28.9	22.4	28	28.4	28.5	28.8	28.2	28.4	88.6	20.3	.9	1.3
13	57.04	25.3	29	21.9	27.5	27.8	28.3	28.2	28.1	28.1	79.4	19	2	2.1
14	54.77	24.8	28.9	21.7	26.8	27.5	27.9	28	28.1	28.3	88.1	20.5	2.1	2.2
15	56.41	27.2	32.7	22.9	27.1	28.2	27.8	28.5	28.2	28.3	78	20.6	3.9	2.9
16	57.78	26.2	31.9	22.1	27.6	28.3	28	28	28.3	28.6	82.4	20.5	2.4	2.4
17	58.23	24.1	27	21.8	27	27.2	27.9	28	28.2	28.3	92.7	20.6	.2	.5
18	59.14	25.3	30.5	23.5	26.9	27.8	27.8	27.8	28.2	28.4	90.5	21.6	.9	1.3
19	58.75	24.9	29.1	23	27	27.6	27.5	27.6	28.1	28.3	89.1	20.8	1.2	1.2
20	58.48	25.2	30.8	22.9	27	27.6	27.6	27.8	28	28.2	88.8	21.1	.9	1.2
21	57.74	25.4	28.8	23	27	27.5	27.6	27.7	28	28.3	83.5	20	2.7	2.7
22	55.02	22.7	24.5	20.4	26.6	26.1	27.4	27.4	28	28.3	90.4	18.6	0	.6
23	57.38	26.6	31.8	22.3	25.9	27.2	27	27.3	28	28.3	84.3	21.5	3	2.1
24	58.41	26.8	32.3	23.7	27	27.8	27.2	27.5	28	28.3	85.9	22.4	2.4	1.7
25	58.51	25.7	31.4	22.2	27.1	27.9	27.6	27.7	28	28.2	82.2	20	2.7	2
26	59.07	24.8	30.1	21.8	26.8	27.6	27.5	27.5	28	28.2	87.1	20.2	1.3	1.4
27	59.38	24.9	30.4	22	26.9	27.6	27.5	27.7	28	28.2	84	19.6	1.9	1.6
28	58.82	25.1	30.6	21.4	26.6	27.3	27.3	27.5	28	28.2	84.7	20	1.5	1.9
29	58.75	24.6	28.5	22.8	26.9	27.3	27.4	27.5	27.9	28.3	92.5	21.3	.5	.6
30	59.26	25.2	30.2	21.4	26.7	27.7	27.4	27.5	28	28.2	85.9	20.3	1.8	1.5
Mean	758.01	25.6	30.6	22.5	27.2	27.9	27.8	28	28.1	28.3	85.5	20.7	1.9	1.7
Total													55.7	51.9
Departure from normal	—1.32	—0.4	+0.4	+0.2							+2.8	+0.2		

Date.	Wind.				Clouds.			Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
	Prevailing direction.	Total movement.	Maximum hourly velocity.	Direction at the time of the maximum velocity.	Amount, mean.	Prevailing form and its direction.				
						Upper.	Lower.			
		Km.	*Km.*		*0–10.*			*h.* *m.*	*mm.*	
1	NE quad.	327	31	NE	9.3	Ci.-S.	Cu.-N. NEbyE	1 30	3.7	◠° a. d a. p.
2	E	349	28	E	9.9	Ci.-S.	Cu.-N. SE	0 00	18.4	● p.
3	N quad.	127	15	N	7.3	A.-Cu. SE	Cu. E	6 45	———	≡² a.
4	NE, WNW	70.5	9.5	NNW	7.4	Ci.-S.	S.-Cu. ESE	1 30	9.4	d ● a.
5	NE quad.	127	13	NE	7.2	A.-Cu.	Cu. E	5 40	1	≡° ●° a.
6	NW quad.	93.5	10	NW	7.4	Ci.-S.	Cu. EbyN	5 15	.8	◯° a. p° p.
7	NW quad.	139	12.5	NW	7.1	A.-Cu. E	Cu., Cu.-N. E	8 05	———	≡° a.
8	WNW	134.5	18	NW	7.8	Ci.-S.	Cu. ESE	8 00	———	≡° a.
9	WSW	130.5	13.5	SWbyW	5.6	Ci.-S.	Cu. E	7 45	2.8	≡° a. ⌐⌿ ⌿ ● p.
10	NW quad.	98.5	16	NW	7.4	Ci.-S.	Cu.-N. NNE	7 25	4.6	⌐⌿ ● d p.
11	NE quad.	120.5	12.5	WSW	7.5	Ci.-S.	Cu. NE	7 30	3	⌐⌿° p p.
12	N quad.	217	23	NNE	10	———	N.	0 00	7.1	● a. d p.
13	N, NNW	278.5	20	NNE, NNW	10	Ci.-S.	S.-Cu. NE	0 00	3.2	● p.
14	NNW	516.5	32	N	9.5	A.-Cu. ESE	N. NbyE, SE	1 20	29.6	● a. d p.
15	ESE	243	19	ESE	2.9	Ci.	Cu.	9 45	———	
16	E quad.	186	16	NNW	6.7	Ci.-S.	Cu. ESE	5 15	8.6	≡° a. ● p.
17	NNW	216	19	NNW	10	———	Cu.-N. ESE	0 00	6.6	● d a. p.
18	NW quad.	140	17	NE	7.8	A.-Cu. SE	Cu. E	4 55	32.9	●² ◠ a. ⌐⌿ ● p.
19	NE quad.	129.5	12	NE, SE	10	Ci.-S.	Cu.-N. E	0 25	10.4	● a.
20	N quad.	148.5	12	NNE, NWbyN	7.2	A.-Cu. ESE	Cu. ENE	3 35	2.6	≡ a. d ● p.
21	N quad.	206.5	25	NbyE	9.6	Ci.-S.	Cu. E	0 00	.2	≡° d a.
22	NNW	354.5	31.5	NNW	10	———	N. NNW	0 00	31.9	≡ a. ● a. p.
23	SE	227	17	SE	8.2	Ci.-S.	S.-Cu. SE	6 00	.1	d p.
24	NE quad.	106.5	12	WNW, NW	7.4	Ci.	Cu. EbyS	8 10	.4	d a. ⌐⌿ p.
25	ESE	78	12	ESE, WNW	8.8	A.-Cu. EbyN	Cu. ENE	5 10	———	≡° a.
26	NE quad.	124.5	15.5	NE	8.9	Ci.-S. ESE	Cu. ENE	2 20	.4	≡° a. ●° p.
27	Variable	105.5	11	W	8.2	Ci.-S.	Cu. E	4 40	.6	≡ d a.
28	NE quad.	153.5	14	NNE	8.7	Ci.-S.	Cu.-N. E	3 20	.8	≡° a. ●° p.
29	Variable	50	4.5	NbyW	9.9	Ci.-S.	S.-Cu. ESE	0 05	2.5	≡° ● d° a.
30	N quad.	93	7	NbyE, NE	7.8	Ci.-S. SEbyE	Cu. E	3 55	3.1	≡² ● a.
Mean		176.4	16.6		8.2			3 57	———	
Total								118 20	184.7	
Departure from normal		+12.3			+1.8			—40 33	+51.8	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.[2]

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[3] Mean.	Maximum.	Minimum.	Relative humidity (mean).[3]	Wind.[3] Prevailing direction.	Force (mean).	Clouds.[3] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	751.38	25.6	------	23.2	89.6	S quad.	2.6	10	------	N.	48	●² d a. p. ↙ p.
2	56.04	27.8	------	23.3	81.7	Variable	1.4	6.8	A.-S., Ci. SW, S	Cu. SSE	2.5	d ● a. ↙ p.
3	57.14	27.6	------	24.7	83.4	Variable	.8	5.2	Ci.-S. ENE	Cu.-N. E	4.1	⌒ ┬ ● d° p.
4	57.24	27.1	------	23.4	81	Variable	1.2	6.2	A.-S. NNE, SW	Cu.-N.	11.2	● ┬ d p.
5	57.30	27.1	------	23.6	82.7	Variable	1.2	9.2	A.-S. E, NE	Cu. NE	------	d p.
6	57.52	26.6	------	24.4	85.4	SE	.8	6	A.-S.	Cu.-N. E	7.6	d a. p. ● ↙ ┬ p.
7	57.97	26.8	------	23.7	85.3	N quad.	1	9.6	A.-S. E	Cu.-N. E	22.8	d ● a. p.
8	57.40	27.2	------	23	83.8	S quad.	1	6	Ci.-S.	Cu.-N. E, NW	11.4	● a. p. ↙ p.
9	57.05	27.1	------	23.5	81.5	Variable	.6	10	A.-Cu.	N., Cu.	.8	┬ ● a. d° p.
10	56.22	27.2	------	24.1	80.8	Variable	.8	10	A.-S. SW	Cu.-N. N	2.8	┬ ● ↙ p.
11	56.31	26.5	------	21.7	80.9	Variable	1	10	A.-S. E	Cu.	------	☋ ↙ ┬ d p.
12	55.89	27.8	------	22.7	79	Variable	1	7.8	Ci.-S. NE	Cu. SW, W	------	
13	55.38	27.7	------	25.3	74.8	W quad.	1.4	10	A.-S. ENE	Fr.-N.	------	d ☋ p.
14	55.96	27.4	------	24.9	79.4	S quad.	1.4	8.6	Ci.-S.	Cu.-N. W	------	☋ p.
15	56.18	27.9	------	23.5	77.7	W quad.	1	9.2	Ci.-S.	Cu.-N. NE	------	┬ p.
16	56.20	26.3	------	23.9	83.2	N quad.	.8	7.8	Variable	N.	4.4	●° a. ● ┬ p.
17	57.09	27.1	------	22.2	78	Variable	1.2	3	Ci.-S.	Cu.	------	
18	57.67	27.2	------	23.1	79.2	WSW	1.2	5.4	Ci.-S.	Variable	------	
19	57.27	26.7	------	24.3	81.6	Variable	1	10	A.-S.	N. E	16.2	┬ ● a. p. d p.
20	56.30	28.2	------	23.2	77.7	NW quad.	1.2	8	A.-S.	Cu.	29	○ ●² p.
21	56.02	27.9	------	23.1	80.6	Variable	1.2	8.6	A.-S.	Cu.-N.	1.5	⌒ ↙ ┬ ●° p.
22	55.80	27.8	------	24.9	79.1	S quad.	1.6	9.2	Ci.-S. WNW	Cu. W, S	------	d ●° p.
23	56.97	27.2	------	24.7	84.8	Variable	1	8.6	A.-S.	Cu.-N. SW	8.4	● a.
24	57.37	26.7	------	24.4	84.6	Variable	1	5.8	A.-S. SE	Cu. ENE	3	●° a. p. d p.
25	57.04	26.4	------	23	84.6	SE	1	9	A.-S. E	Fr.-N. E	------	d° a.
26	56.76	26.7	------	22.2	78.6	Variable	1.2	9.6	A.-S.	Cu.-N. E	------	
27	57.32	25.6	------	22.9	82.6	Variable	1.2	10	A.-S.	Cu.-N. ENE	8.4	d a. p.
28	57.16	24.5	------	22.6	89.4	Variable	1	10	A.-S.	N. NNE, NE	29.1	● a. p.
29	57.46	25.2	------	23.1	85.6	N quad.	1.4	10	A.-S.	N. ENE	1	●² a. d° ↙ ┬ p.
30	57.65	26.6	------	22.9	81.8	S quad.	1.4	7.2	A.-S. ENE	N.	1.5	●° p.
Mean	756.64	26.9		23.5	81.9	----------	1.2	8.2	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	213.7	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	752.86	26.2	30.5	23.9	86.2	SE quad.	1.5	10	------	Cu.-N. S	------	↙° ●° a. ↙² d p.
2	57.18	27.4	31	24.1	85.7	ENE	1.3	7.7	A.-Cu. NW	Cu.-N. SE	8.9	↙² a. ●° p.
3	58.04	27.1	30.7	24.1	88.3	NE	1	5.8	A.-Cu. N	Cu.-N. E	14.5	●° a. p.
4	58.10	25.7	29.7	23.5	92.2	Variable	.5	7.5	------	N. E	26.9	●° a. p.
5	57.92	26.3	30.8	23	88.3	E quad.	.5	9.2	A.-Cu. E	Cu.-N. SE	14	●² a. ∞ p.
6	57.74	26.8	30	23.3	89.2	NNE	.8	7.3	Ci. NE	Fr.-N., Cu.-N. E	------	●° a.
7	58.26	25.8	28.4	23.4	91.3	Variable	.5	8.2	A.-Cu. ESE	Cu.-N. E	12.7	●° a. ⌐◹ ●² p.
8	58.11	26.4	30.6	22.8	88.3	NE quad.	.8	6.8	Ci.-S. SE	Cu.-N. E	1.3	↙° p.
9	57.47	26.2	29	23.3	88.3	NW	1	7.5	Ci.-S. E	Cu.-N. NW	3.3	↙ d a. ┬ ●° p.
10	56.52	25.3	29.1	23.5	89.5	Variable	.7	9.3	Ci.-S. NE	Cu.-N., Fr.-N. WNW, E	12.4	☊² a. ●° a. p.
11	56.52	25.3	28.1	21.5	88.5	NW	1.7	9.7	Ci.-S.	Cu.-N. W	------	● a.
12	56.10	26.3	30.2	23.1	86.8	SW quad.	.8	9.2	Ci.-S. NE	Cu.-N. W	------	☊² a. ∞° p.
13	55.72	27.7	32	24.8	80.8	S quad.	1	8.5	Ci.-S. SE, NE	Cu., Cu.-N. WSW, W	2.5	☊² a. p. ∞ p.
14	56.28	26.3	29.7	24	88.2	NW quad.	.7	6.5	A.-Cu.	Cu. WNW	------	●° a. ☊² p.
15	56.42	27	30.1	23.3	86.8	NE	.7	5	Ci.-S. NE	Cu.-N. S	------	☊² a. ∞ p.
16	56.69	24.6	26.5	22.7	93.7	Variable	1.2	9.2	A.-Cu.	Fr.-N. WNW, W	67.6	●² a. p. ☊² p.
17	57.71	26.2	30.6	22	86.7	Variable	.8	4.2	Ci.-S.	Cu. NW	------	☊² a. p.
18	58.12	26.6	29.9	22.8	87.2	NE, SE	1.3	5.8	A.-Cu. E	Cu.-N. SE	4.8	☊² a. d ⌐◹ p.
19	57.58	24.7	26.4	23.5	94	Variable	.8	9.8	A.-Cu.	Cu.-N.	71.9	d° ●² a. p.
20	56.56	26	30.1	22.6	86	W	.3	7.8	Ci.-S. E	Cu.-N., Cu. W	------	●° a.
21	55.92	26.6	30.1	23.7	88.8	SW quad.	1	8.5	A.-Cu. NW	Cu.-N. W	25.2	☊² a. ↙ ●² p.
22	56.36	27.2	31.2	23.9	86.4	Variable	1	5.5	Ci.-S.	Cu. SW	19.8	● a. ∞ ↙² p.
23	57.64	25.8	28.6	23.3	91.2	S	.7	8	Ci.-S.	Cu.-N.	6.6	d° ●² a. ↙ p.
24	57.93	24.6	27.5	22.6	93.8	S	.7	9	------	Cu.-N.	26.4	● a. ┬ ●° p.
25	57.32	24.2	27.5	22.2	93	S quad.	.8	10	------	Fr.-N. E	43.7	d° ● a. d ↙ p.
26	57.25	25.4	29.2	22	89.1	E quad.	.8	9.5	Ci.-S.	Cu. E	22.6	☊ a. ●° p.
27	57.44	23.6	24.8	22.5	94.7	SE quad.	1	10	------	N.	69.3	●° a. p.
28	56.51	23.8	25.5	22.2	95.3	NE quad.	1.2	10	------	N.	204.2	● a. ●² ⌐◹ ↙² p.
29	56.90	25	26	23.7	94	ENE	1.8	9.2	------	N.	31.7	●² a. d ↙ p.
30	57.60	26.1	30.2	23.5	89	NE quad.	.8	7.3	Ci.-Cu. SE	Cu.-N. E	3.6	↙ ●² a. ↙ p.
Mean	757.03	25.9	29.1	23.2	89.4	----------	.9	8.1	----------	----------	------	
Total	-------	------	------	------	------	----------	------	------	----------	----------	693.9	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] The barometric readings of this station seem to be too low.
[3] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	750.34	25.1	27.6	23	90.2	S quad.	28.6	9.3	Ci.-S.	Cu.-N., N. SSW	49.5	≡ ●² ↙ a. ↙° ● p.
2	56.90	27.2	30.9	24.7	78.4	SE quad.	8.2	5.7	Ci.-S.	Cu. SE	------	☊ ◯² a. ⌐◪ p.
3	57.85	27	30.8	24.3	76.3	E quad.	7.8	3.5	Ci.	Cu. E	------	☊ a.
4	57.92	27.2	30.9	24	76.2	ENE	9.9	3	Ci.	Cu. E	------	☊ a. ⌐◪° p.
5	57.94	26.9	30	24.3	76	E	8.1	5.3	Ci.-S. ESE	Cu. ENE	------	≡° ☊ ◯ a. ∞ ≤ p.
6	57.79	26.4	30.2	23.8	80.2	NE	7.3	6.3	Ci.-S.	Cu., Cu.-N. NE	.5	≡° ●° a. ⌐◪ p.
7	58.27	26.6	30.5	23.9	77.2	NE quad.	7.5	6.7	Ci.-S.	Cu.-N. ENE	25.1	☊ a. ⌐◪ ≤ p.
8	57.87	26.4	30.2	23	79.1	NE	6.5	5.8	Ci.-S.	Cu. ENE	20.8	≡° ● ⌐◪ a. ᗢ p.
9	57.61	26.2	29.5	23	82.2	ENE, NE	5.8	7.8	Ci.-S. ESE	Cu.-N. E quad.	.8	● a. ◯ ⌐◪ a. p.
10	56.70	25	30.3	22	83	Variable	6.3	6.5	Ci.-S. SE	Cu. NNE	8.4	≡° ☊ a. ⌐◪ ● p.
11	56.73	25.4	29	21.8	81.5	Variable	5	6.5	Ci.-S. E	Cu., Cu.-N. NNE	------	☊² a. ᗢ p.
12	56.24	26.4	30.7	22.2	78.2	W, SE	5.7	4	Ci., Ci.-S.	Cu. NW quad.	------	☊ a.
13	55.36	26.3	29.4	24.1	79.2	W quad.	6.8	7.1	Ci.-S.	Cu.-N. W quad.	4.1	☊ a. ● ∪ p.
14	56.23	26	29.2	23	81.3	SW	5	6.7	A.-Cu. S, ENE	Cu., Cu.-N. SW	------	☊ a. ᗢ p.
15	56.53	27.1	31.3	23.3	75.2	E	5.7	4.5	Ci.	Cu. Variable	------	☊ a.
16	56.67	26.2	29.5	23.6	77.5	NE quad.	6.8	7.8	Ci.-S.	cu.-N., N.NE quad.	1	≡° ☊ ⌐◪ a. ● p.
17	57.67	26.1	30.6	22	78.3	SE, S	5.6	3.8	Ci.	Cu. E	.5	≡ ☊ a. ●° p.
18	58.28	26.6	30.5	23.6	79	SE, E	6.5	3.5	Ci.	Cu. E	------	≡° ☊ a. ⌐◪ p.
19	57.56	25.5	29.6	23.3	85.2	SE	4.8	7.3	Ci.-S.	Cu.-N. NE, ENE	12.5	≡° ☊ a. ● ⌐◪ a. p.
20	56.70	26.7	30.5	23	77.5	E	5.4	5.7	Ci.-S.	Cu. NNE	.5	≡° ᗢ a. ⌐◪ p.
21	55.94	26	29.9	24	85.3	SE	3.6	7.3	Ci.-S.	Cu.-N. NW	22.4	☊ d a. ⊤ ● p.
22	56.15	26.5	30	24.2	82.3	W, SW	7	5.5	Ci., Ci.-S.	Cu.-N. SW	3	☊ a. ● p. ⌐◪ a. p.
23	57.60	26.4	29.1	24.5	81.2	SW, SSE	5.1	5.8	Ci.-S. E	Cu. SSW, S	------	≡° ☊ a. ≤ p.
24	57.91	26	30.1	23	84.7	E	6.1	5.8	Ci.-S. ESE	Cu., Cu.-N. NE	12.2	≡° ☊ a. ● ⌐◪ p.
25	57.38	25.3	29	22.4	85.5	ENE, N	5.1	7.3	Ci.-S.	Cu.-N. NE	5.5	☊ ∪ ● a.
26	57.43	26.1	30	22.5	78	NE quad.	8.5	5.5	Ci.-S. SE	Cu. E	.3	●° a. d p.
27	57.74	24.9	26.4	23.3	84.7	NE	6.7	8.3	A.-Cu.	Cu.-N., N. ENE	24.9	☊ d a. ● p.
28	57.16	23.8	26	22.2	92	Calm	3.8	9.7	----------	N. ENE	38.8	● d a. p.
29	57.26	23.9	26	22.6	90	NE	6.2	8.8	Ci.-S.	Cu.-N. ENE	14.7	≡° ● a.
30	57.64	26	30.9	22.3	77.2	ENE, NE	5.5	6.3	Ci.-S. E	Cu. ENE	3.8	☊ a. ≤ p.
Mean	756.98	26	29.6	23.2	81.1	----------	7	6.2	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	249.3	

ILOILO.

[ϕ=11° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	749.30	24.9	26.8	23	88	SW quad.	25.2	10	----------	N.	128.6	● ↙ a. p. ≤° d p.
2	56.78	25.3	27.1	23.4	88.2	SE	7.9	9.7	Ci.-S.	Cu.	1	● a. p.
3	58.24	27.2	32	23.4	82.5	NE	7.2	8	A.-Cu. E	Cu.	------	⊤ d p.
4	58.27	27.3	31.5	23.4	78.8	NE	11.6	6	Ci.	Cu.	5.3	⌐◪ ● ≤ p.
5	58.39	26.4	30.6	23.5	84.2	NE	10.5	8.5	A.-Cu. E	Cu.	.8	● a.
6	58.36	25.8	28.2	24.3	87.7	NE quad.	9.7	9	Ci.-S.	Cu.	16.2	● a. p.
7	58.50	27.1	31.4	24.3	80.5	NE	10.4	7.8	Ci.-S.	Cu. NNE	------	≤ p.
8	58.18	27.8	31.6	24.3	77.3	NE quad.	11.1	6.7	A.-Cu. E	Cu.	------	≤ ⊤ p.
9	58.10	26.4	30	24.4	82.7	N	6.6	9.2	Ci.-S.	Cu.	4.3	≤ ⌐◪ a. ● p.
10	57.25	26	30.5	23.8	84.3	NNE, NE	4.4	9	A.-Cu.	Cu. N	------	d² ⊤ p.
11	57.02	26.1	30.4	22.4	83.5	Variable	4	9	Ci.-S.	Cu.	32.5	☊² ≡° ◯ a. ● p.
12	56.88	26.3	30	22.8	84.8	SW, W	5.5	9.2	Ci.-S., Ci.	Cu.	------	≡° a. ≤ ⌐◪ p.
13	56.13	25.8	27.9	23.5	88.5	NNW, S	3.5	9.8	Ci.-S.	Cu. W	2.1	d ≡° a. ● p.
14	56	27	30.4	24.4	80.8	SW	10.9	8.3	A.-Cu. WSW	Cu.	------	
15	56.85	26.9	30.5	23.8	81	SW	5	7	A.-Cu. E	Cu.	------	☊ a. d ∩ ≤ p.
16	56.96	26.5	30.4	23.8	82.8	NE quad.	7.2	8.8	A.-Cu.	Cu.	3.6	⊤ a. ● a. p. ⌐◪° p.
17	57.75	26.1	29.9	23.5	84.5	SW	6.9	4.8	Ci.	Cu.	------	
18	58.61	26.1	31.4	23.4	85.1	Variable	5.4	7.2	Ci.	Cu.	100.3	☊² a. ⊤ ⌐◪ ● ≤ p.
19	58.05	25.1	29.6	23.1	91.2	NE	6.3	8.7	Ci.-S.	Cu. N	9.9	● ⊤ a. p. ≤ p.
20	57.22	25.7	30.5	23.4	88.8	NE	8.4	8.8	Ci.-S.	Cu. NNE	4.3	● d p.
21	56.71	26	29.6	24.3	88.8	NE	5.2	9.5	Ci.-S.	Cu. N	13.7	● p.
22	56.51	26.5	29.5	24.4	87.3	SW	5.9	8.5	Ci.-S.	Cu.-N. SW	3.5	≡° a. ● a. p. ≤ p.
23	57.69	26.5	29.6	24	84.3	SW	4.4	7.3	Ci.-S.	Cu.	31.2	⌐◪° a. ≤ ⌐◪ ● p.
24	58.07	25.9	31	23.4	87	NE	6.4	6.8	Ci.,Ci.-S.	Cu.	27	≤ a. p. d ⌐◪ ● p.
25	57.69	25.7	28.6	23.8	88	NE	9.9	7.8	Ci.-S.	Cu. ENE	6.9	● a.
26	57.65	26.7	30.1	24	80	N, NE	12.4	6.8	A.-Cu. E	Cu.	9.4	≤ ⌐◪ ● p.
27	57.94	25.1	30	23.3	87.8	N quad.	11.5	9.5	A.-Cu. E	Cu.	38.9	● a. p.
28	57.68	24.7	27.5	22.9	89.2	N	5.7	10	Ci.-S.	Cu.-N.	19	● a. p.
29	57.41	24.4	27	22.4	91.8	NE	8.6	9.8	Ci.-S.	Cu. NE	1.5	● a. p.
30	58.02	26	29.5	23.8	85.3	NE	9.6	8	A.-Cu., Ci.-S.	Cu.	.5	
Mean	757.27	26.1	29.8	23.6	85.2	----------	8.2	8.3	----------	----------	------	
Total	-------	------	------	------	------	----------	----------	----------	----------	----------	460.5	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.[1]

[ϕ=11° 00′ N; λ=124° 36′ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.83 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km.p.h.*	*0–10.*			*mm.*	
1	747.71	------	------	------	------	SE	---------	10	Ci.-S.	N.	39.9	≤ ≤² ●² a.
2	57.40	------	------	------	------	SE quad.	---------	8.8	Ci.-S.	Cu.-N.	------	⌐⌐ ≤ p.
3	58.40	------	------	------	------	NE quad.	6.6	5.7	Ci.	Cu.-N.	------	≤ p.
4	58.60	------	------	------	------	N quad.	---------	7.3	Ci.	Cu. E	29.8	Ω a. ● ≤ p.
5	58.50	------	------	------	------	N, NE	4.7	8.3	Ci.-S. SE	Cu.-N. NE, E	1.8	d ≡° p a.
6	58.38	------	------	------	------	N	5	8.7	Ci.-S.	Cu.-N. E	3.3	d a. ≤ p.
7	58.83	------	------	------	------	NE quad.	5.9	8.5	Ci.-S.	Cu.-N. E	------	≡° a. ⌐⌐° p.
8	58.38	------	------	------	------	N	5.7	8.7	Ci.-S.	Cu.-N. E	8.2	≡° p a. ≤ ⊕ p.
9	58.02	------	------	------	------	N quad.	3.8	9.7	Ci. E	Cu.-N.	7.9	≡° a. ⊤ ⌣ p. d
10	57.13	------	------	------	------	NE quad.	4.5	9.7	Ci.-S.	Cu.-N. EbyN	15.8	≡° d a. ⊤ ● p.
11	57.27	------	------	------	------	N	4.7	9.7	Ci.-S.	Cu.-N.	2	≡° a. p. ⊕ ⌣ p.
12	56.72	------	------	------	------	N	5	9.2	Ci.-S. E	Cu.-N. NW	6.4	≡° a. d p.
13	55.86	------	------	------	------	N	4.3	10	Ci.-S.	Cu.-N. SW	18.8	≡° d a. ● ⊤ ⌣ p.
14	56.36	------	------	------	------	E quad.	6.7	8	A.-Cu. SE	Cu.-N. S	------	≡° a. ⌣ p.
15	56.72	------	------	------	------	N	5.3	7.2	Ci.-S.	Cu.-N. E	------	Ω a. ≤ ⊕ p.
16	56.80	------	------	------	------	N quad.	3.9	8.3	Ci.-S.	Cu.-N. E, NE	10.4	≡° a. d a. p.
17	57.88	------	------	------	------	Variable	5.1	6.3	A.-Cu. EbyS	Cu.-N.	------	≡° a.
18	58.27	------	------	------	------	N	5.9	5.2	Ci.	Cu.-N.	9.1	d ⊤ ⌒ ≤ p.
19	57.64	------	------	------	------	N	3.6	8.7	Ci.-S.	Cu.-N. WbyN	4	d p.
20	56.75	------	------	------	------	N quad.	4.1	9.2	Ci.-S. E	Cu.-N. NbyE	28.2	≡° a. ● p.
21	56.13	------	------	------	------	NE quad.	3.6	9.2	Ci.-S. EbyS, SE	Cu.-N. NbyW	31.8	≡° a. ⌐⌐ ● p.
22	56.48	------	------	------	------	SE quad.	8.3	8.5	Ci.-S.	Cu.-N. S	7.9	d ≡° ⌒ ⌐⌐ ≤
23	57.66	------	------	------	------	N, S	5.1	7.7	A.-Cu. E	Cu.-N.	1.3	≡° a. p a. p. ≤ p.
24	58.05	------	------	------	------	NW quad.	4.6	8.7	Ci.-S.	Cu.-N. ENE, E	23.9	≡° a. ⊤ ● p.
25	57.50	------	------	------	------	NE quad.	7	8	Ci.-S. SE	Cu.-N. NE quad.	.3	d ≡° a.
26	57.54	------	------	------	------	NE quad.	6.4	9	Ci.-S.	Cu.-N.	5.7	p ≡° a.
27	57.83	------	------	------	------	N	3.7	9.7	Ci.-S.	Cu.-N. E	16.7	≡° a. ● a. p.
28	57.06	------	------	------	------	N quad.	3.8	9.7	Ci.-S.	Cu.-N. E	6.7	d a. p.
29	57.33	------	------	------	------	NE quad.	7.2	9.3	Ci.-S.	Cu.-N. E	------	≡° a. ≤ p.
30	57.81	------	------	------	------	NW quad.	5.3	7.3	Ci.-S. E	Cu.-N. NE	.3	≡° a. d p.
Mean	757.17	------	------	------	------	----------	5.2	8.5	----------	----------	------	
Total	---------	------	------	------	------	----------	---------	---------	----------	----------	279.5	

TACLOBAN.

[ϕ=11° 15′ N; λ=125° 00′ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	749.99	24.1	26	22	-----	SE quad.	6.5	10	----------	N SE	132.1	⌐⌐² a. ⌐⌐² ⌐⌐° p. ●²
2	58.31	27	30.4	24.5	86.7	ESE, S	.7	7.7	Ci. NE	Cu.-N. S	------	●² a. ○² a. p.
3	59.14	27.4	33	24	83.7	WNW, S	.3	4.3	Ci.-S., Ci. NE	Cu. E	------	d p.
4	59.26	26.7	32.5	23.7	83.5	NE quad.	.5	5.8	Ci.-S.	Cu.-N. E	------	Ω² a. d p.
5	59.14	26.9	31	24	85.3	NW quad.	.8	6.3	Ci.-S. W	Cu. E	3	○° a.
6	59.35	25.8	27.7	24	90.2	NW quad.	.7	8.3	----------	Cu.-N. E	24.9	● a. p. ⊤ p.
7	59.32	25.5	32.5	24	92.2	NW quad.	.7	7.3	Ci.-S. WNW	Cu., Cu.-N. E, ENE	4.1	○° a. ● d p.
8	59.12	26.2	31.5	23.8	87.2	NW	.2	6.7	Ci.-S. SSW	Cu.-N. ENE	------	≤ p.
9	58.62	26.4	32.3	23.8	86	WNW, NE	.7	8.2	Ci.-S. SW	Cu. E, ENE	31.2	●² p.
10	57.46	24.6	28.9	23.5	90.5	NW quad.	1	8.7	Ci.	Cu.-N. NE	34.1	●² p.
11	57.62	25.2	27.3	23.2	91.2	NNW, N	.7	8.8	Ci.-Cu.	Cu.-N. NNE	3	● a. ⌣² ⊕² p.
12	56.94	26.3	31.5	23.5	84.8	WNW, NW	.7	7.7	Ci.-S. S	Cu. NWbyW	------	≡ ○² a. ⌣ ⊕ ○° p.
13	56.15	25.8	28.8	24	89.3	Variable	.3	9.3	Ci.-Cu.	Cu.-N. WNW	.8	● ⌣° p.
14	57.22	26.2	30.8	23.2	84.7	S quad.	.8	7.7	Ci.	Cu.-N. S	2	● a. ⌣ ⊕ p.
15	57.45	27.8	32	24.5	82.9	Variable	.5	7	Ci.-S. SW	Cu. E	------	⌣² ⊕² p.
16	57.58	25.6	29.4	24.2	89.3	WNW, NW	.8	8.8	Ci.-Cu. SW	Cu.-N., N. NEbyN	7	● a. p.
17	58.52	26.4	31	22.4	80.3	ESE	.3	4.8	Ci.-S. SW	Cu. E	------	
18	59.16	26.1	33.4	24	88.5	NW quad.	.7	7.2	Ci. W	N. ESE	2	Ω a. ● ≤ p.
19	58.59	24.6	29.5	23.5	93	NW	1.2	8.7	Ci.-S. SW	N. ENE	13.7	d ● ⊤ p.
20	57.54	25.5	30.3	22.6	91.7	NW quad.	.5	7.8	Ci.-S.	Cu.-N. NNE	28.9	●² d ⊤ p.
21	56.63	26.2	31	24	89.5	NW quad.	.8	8.2	Ci.-S., Ci. S	Cu.-N. N	9.4	● a. p.
22	57.01	26.9	31	23.7	85.9	SW quad.	1	8.7	Ci.-Cu. N	Cu. S	.8	⌣² ⊕² a. ≤ ● p.
23	58.58	27.8	32.3	24.5	83	SE quad.	1	5.3	Ci.-S. N	Cu.-N., Cu. SSE	------	
24	59.06	26.1	30.4	24	91.3	NW	.7	7.8	Ci.-S. NWbyW	Cu. SE	17.8	Ω² a. ● a. p.
25	58.42	26.8	31.5	24.2	82.8	Variable	1	5.5	Ci.	Cu.-N. SE	.5	Ω² ●° a.
26	58.54	26.7	31.8	24	84.1	Variable	.5	7.3	Ci. W, WSW	Cu.-N., Cu. ENE	14.3	Ω a. ○² a. p. ● p.
27	58.74	25	29.8	22	90.7	W, NW	1	9.8	----------	N., Cu.-N. E	24.6	● a. p. ⌐⌐° p.
28	57.97	24.8	27.2	23.3	91.2	NW, SE	.3	9.8	Ci.	N. E	5.5	● a. p.
29	58.32	26.3	30.6	24	87.7	SE	.5	9.3	Ci.	Cu.-N. E	.5	d a. ●° p.
30	58.92	26.8	30.8	23.6	85.5	Variable	.7	7	Ci., Ci.-Cu.	Cu.-N. ENE	3.3	● p.
Mean	757.96	26.1	30.5	23.7	87.3	----------	.9	7.7	----------	----------	------	
Total	---------	------	------	------	------	----------	---------	---------	----------	----------	363.5	

[1] The anemometer of this station was out of order during part of the typhoon of November 1. The thermometers were broken on the same day.

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.[1]

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	748.93	24.4	27.6	22	95.5	N, SE	6.8	10	A.-S. N	N. N, SE	26.1?	◟a. ◞² ● a. p.
2	56.70	26	29	24	90	S quad.	1.2	9.3	Ci.-S.	N. SE	2.3	●a ◸ ◟ ●° p.
3	58.42	27	31.4	24.2	87.5	Variable	1.2	2.8	Ci.	Cu. E	------	●° a. ◟ p.
4	58.48	27.4	30.7	25	83.8	NNE	1.5	5.7	Ci., Ci.-S. NE, E	Cu. NE, E	------	d° ◟ p.
5	58.72	27.3	30.5	24.5	80.1	NNE	1.3	6.3	Ci. E	Cu.,N. NE	------	d° ◟ p.
6	58.47	27.3	30.4	25.5	81.3	NNE, NE	1.5	7.5	Ci.-S.	N. NE	3.3	● ◟ p.
7	58.80	27.5	31	25.1	83	NE	1.2	7	A-Cu SE	Cu. NE	------	☋° ◟ p.
8	58.34	27.4	30.8	25.2	84.8	NNE	1	7	Ci.-S.	Cu.-N. E	7.6	⊕ ◟ ┬° ●° p.
9	58.21	25.5	29.2	23	92.2	Variable	1	9.3	Ci.-S.	N. SE, N	52.1	● ┬° a. ⊕ ♄° p.
10	56.93	26.4	30.4	24.4	84.5	Variable	1	6.7	Ci.-S. NE	N. E	.5	d² a. ◟ p.
11	56.95	26.3	31	23	84.2	NNW	.8	5.8	Ci-S. SE, E	Cu. NW	------	♌ ⊕° ○° a. ◟ p.
12	56.65	26.5	31.2	23.4	84.8	NW quad.	1.2	7.3	Ci-S.	Cu.,N. NW	4.8	⊕ ○ a. ◟ ☋ ┬° p.
13	55.82	25.2	27.1	23.5	92	NW quad.	2.8	9.7	Ci-S. NW	N. NW, N	17.9	●° a. p. ◟° p.
14	55.53	27.2	32.7	23.2	82.1	SSE	1.3	8.5	Ci.-S. E	N. S	------	●° ⊕ ○ a.
15	56.54	27.2	32	23.4	84.5	Variable	1	5.3	Ci. NE	Cu.-N. SE	51.3	┬° ☋ ◟ p.
16	56.90	26.6	30.5	22.7	83.1	N quad.	1.3	9.2	Ci.-S.	N. NE quad.	6.3	●²⊕ ○ a. ●° ☋ p.
17	57.58	25.8	30.5	23.3	88.6	N	1.3	7	Ci. NE	N. SW, SE	2.3	◠²a. ◸ ◟ ☋°p. ●°
18	58.50	26.5	30.8	22.5	86.2	N	1.2	5.3	Ci.	Cu.,N. NE	1.5	d ♌² a. ◟ ◸ ● p.
19	57.88	26.4	29.9	24.3	88.2	N, NE	1.3	9	Ci.-S. N	N. NE	13	●a. ◟ ☋° ☾° p° p.
20	57.36	27	30.4	25.1	85.2	N	1.7	8.3	Ci., Ci.-S.	N., Cu. N, NE	3.6	☋° a. ●° a. p. ◟ p.
21	56.48	27.4	30.3	24.9	85.7	N	2.7	8.8	Ci.-S. N	N.-cf., Fr.-N. N	15.5	p° a. p. ◟ p.
22	56	26.6	32	23	83.3	Variable	1.2	9.7	Ci.-S. W	N. W	16.5	⊕ ○ a. ◟ ┬° p. ●
23	57.34	27.2	32.5	23.5	85.7	SE	.8	7	Ci.-S.	Cu.,N. SE	12.7	◸ ◟ p. ●° a. p.
24	58.17	26.5	30.8	23.4	88.8	NE quad.	1	7.7	Ci. SE	N. E	2.3	♌ ● a. ●° ◟ ┬° p.
25	57.94	26.4	29.7	24.4	87.4	NE, E	1.7	8.2	Ci.-S.	N. NE	3.1	☋° ● a. ●° p.
26	58.20	27.2	30	24.5	80.5	NE quad.	1.7	7.8	Ci. NE	Cu. NE	------	◟ p.
27	58.44	26.8	29.9	24.4	83.2	NE	1.7	9.2	Ci.-S.	N. NE	13.3	● a. p.
28	57.62	26.5	28.8	24.5	85.7	NE, N	1.7	9	Ci.-S.	N. NE	2.3	● a. ●° p.
29	57.72	26.5	28.3	24.4	81.1	NE	1.3	9.5	Ci.-S. NE	N. NE	------	------
30	58.34	26.7	29.7	24.5	83.8	NE	1.2	8.3	Ci.-S.	N. NE	4.9	●° a. ◠ ● p.
Mean	757.27	26.6	30.3	24	85.6	------	1.6	7.7	------	------	------	------
Total	------	------	------	------	------	------	------	------	------	------	263.2?	------

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	751.86	24.8	26.3	23	91.6	SE	5	10	A.-Cu.	N. SE	122.2	◞ a. ◸² ◟ p. ●
2	58.03	25.8	30.5	23	90.3	Variable	.5	8.5	A.-Cu. S	S.-Cu. SE	2	●a. ┬ ◟ p p.
3	58.72	25.8	31.9	22.6	90.3	NE quad.	.7	3	Ci., A.-Cu.	S.-Cu. E	6.9	♌ a. ● p.
4	58.80	26.4	31.4	23.4	86.2	N quad.	1.2	3.3	A.-Cu.	S.-Cu. E	2.8	♌ ┬ a. p◡ a. p.
5	58.90	25.6	30.3	22.5	90.3	NE	.7	7.7	Ci.-S.	S.-Cu. E	2.8	●° a. d p.
6	58.98	24.6	28.5	22.9	92.8	NE quad.	1.2	7.5	Ci.-S. SE	S.-Cu. ENE	8.9	● a.
7	59.11	26.7	33.3	22.7	85.7	N quad.	1.3	4	Ci.	S.-Cu. ENE, NE	------	◟ p.
8	58.74	25.4	31.5	22.3	91	N quad.	.8	6	Ci.-S.	S.-Cu. E	7.6	♌ a. ● ┬° ◟ p.
9	58.29	24.8	30.4	22.9	92.3	N	1	7.5	A.-Cu. E	S.-Cu. NE	16.3	● ┬° p.
10	57.22	24.2	27.8	22.6	94.5	N, NE	.8	9.8	A.-Cu.	S.-Cu. NE	3.8	●° a. p. ◡ p.
11	57.16	25.2	28.3	22.8	90.8	N	.7	8.2	A.-Cu.	S.-Cu. N, NNW	------	◡ p.
12	56.43	25.6	31.4	22	86.5	NW quad.	1.2	7.8	Ci.-S.	S.-Cu. NW	78.7	◡ ● p.
13	55.47	25.2	27	23.6	92.7	W quad.	1.2	10	Ci.-S.	N. WNW, SW	15.3	●² a. ●° p.
14	56.63	26.2	31.4	23.8	87.3	S quad.	1.7	7.7	A.-Cu. SE	S.-Cu. SSE	------	☋ ◡ p.
15	57.13	26.5	31.8	22.7	87	N	1	5.3	Ci.	S.-Cu. ESE	------	◟ ☋ ◡ p.
16	57.33	25.2	30.7	23.3	88.2	N, NE	1.3	8.5	A.-Cu. E	S.-Cu. NE	19.3	d° a. ●° ◡ p.
17	58.14	25.9	31.3	21.9	86.2	N quad.	1	4.3	Ci.	S.-Cu. SE	------	◡ p.
18	58.83	25.4	30.7	23.2	90.8	NE quad.	1	6.7	Ci.	S.-Cu. E	14.5	● ┬ d° p.
19	58.24	25.1	28.9	23.1	92.5	N quad.	.8	8.2	A.-Cu. NE	S.-Cu. NE	3	◡ a. ● p.
20	57.15	25.8	31.5	21.9	90.2	N	1	7.5	Ci.-S.	S.-Cu. NE	8.9	◡ d° ● a. ◠° ◟ p.
21	56.33	25.4	29.8	23.2	91.3	NW	.8	8.3	A.-Cu.	S.-Cu. N	3.3	◡ a. ●° p. d° a. p.
22	56.27	27	29.9	24.1	88.2	SW quad.	1.2	8.2	A.-Cu. S	S.-Cu. S	20.4	p a. ┬ ◟ ●° p.
23	58.20	26.4	31.4	23.4	88.8	Variable	.7	6.2	A.-Cu. SE	S.-Cu.	1	◸ ◟ d p.
24	58.46	25.7	30	23	90.7	NE quad.	1	6.5	A.-Cu.	S.-Cu. E	10.2	● a. p. ┬ d p.
25	58.22	25.5	30.1	22.7	88.8	NE quad.	1.2	8.5	A.-Cu., Ci.-S.	S.-Cu. NE	2	d° a.
26	58.38	25.6	30.2	21.6	85.8	NE quad.	1.5	6.8	Ci.-S.	S.-Cu. ENE, E	13.7	♌ ≡° ●° a. ◸ ●p.
27	58.53	24.9	31.1	22.9	90.8	NE	.8	8.3	Ci.-S.	S.-Cu. ENE, E	9.4	d a. p ●° p.
28	57.70	25.4	30.3	21.9	86.7	NE quad.	1.2	8.2	Ci.-S.	S.-Cu. ENE	------	≡° a.
29	58.08	24.8	28.6	21.2	89.2	N	.7	8.5	Ci.-S.	Variable E	.5	≡° d° a.
30	58.52	25	30.1	21.9	89.5	N	1	6.7	Ci.-S.	S.-Cu. ENE, NE	9.7	●° a. d° a. p.
Mean	757.66	25.5	30.2	22.7	89.6	------	1.1	7.3	------	------	383.2	------
Total	------	------	------	------	------	------	------	------	------	------	------	------

[1] The rain-gauge of this station was blown down by hurricane winds on November 1.

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	753.88	24.2	27.1	22.5	96.7	E quad.	44.4	10	Ci.-S.	N. ENE	279.4	●² ↙ a. p.
2	57.62	26.5	30.1	23	86	E quad.	12.9	9	Ci.-S.	Cu.-N. SE	6.1	● a. p. ┬ p.
3	58.66	27.6	31	24.6	83	NE	8.8	3.2	Ci. SSE	cu.-N.,cu.ESE,NE	------	↙° p.
4	58.90	27.4	30.9	24.8	80.5	NE	11.1	4	Ci., Ci.-S.	cu.,Fr.-N.NE,ENE	2.8	● a. ↙ p.
5	58.89	26.4	32.1	24.1	82.7	NE	9.9	4.3	Ci., Ci.-S.	Cu.,Fr.-N. NE	3.9	d a. ● p.
6	58.73	27.4	31.1	23.5	80	NE	11.7	6.3	Ci.-S.	Cu.,Cu.-N.ENE,NE	7.6	d² a. d° p.
7	58.92	27.3	30.7	23.5	83.8	ENE, ESE	8.2	5.7	A.-Cu. E	Cu.-N.,Cu.NE,ENE	4.6	● a. ↙° p.
8	58.77	26.4	30.2	23.6	88.5	ENE	5.3	5.7	Ci.-S. W	N.,Cu. NE	9.7	● a. p. ↘° p.
9	58.14	26.7	31.2	21.7	80.9	ENE, ESE	5.5	3	Ci. NW	Cu.	------	↙° p.
10	56.98	25.1	31.5	20.8	85.1	NE, ENE	4.9	4.5	Ci. SSE	Fr.-N. NE	.3	≡° a. d° a. p.
11	56.75	25.4	30.4	21.3	85.7	E quad.	4.5	7.5	Ci.-S. E	Cu.	------	≡° a. ⌣ p.
12	56.15	25.7	32.2	21.2	84.6	NNE	8.5	6.8	Ci. SE	Cu. NNE, N	14	● ↙ p.
13	54.82	24.6	26.6	23	95	NW	4.4	10	Ci.-S.	Fr.-N. SE	25.4	● a. p.
14	55.82	26.6	30.6	23.4	85.8	Variable	4.9	7.8	A.-Cu. SSE	Fr.-N. S	.8	d² a.
15	56.84	27.4	31.5	23.4	84.5	ENE, NE	7.7	3.8	A.-Cu. SE	Cu. ENE	------	≡° a.
16	57.07	26.5	28.4	24.9	79.7	NE	13.6	7.5	Ci.-S.	Cu.	5.4	d a. ● p.
17	57.75	27.7	30.6	24.6	79.5	NE, E	8.3	5.8	Ci. NE	Fr.-Cu., Cu. SE	------	↙ p.
18	58.70	26.4	31.3	23.7	88.3	E	6.1	4.5	Ci.	N. E	19.5	● ↙ p.
19	58.05	25.6	29.6	22.6	87	NE	8.2	9.2	Ci.-S.	Fr.-N. N, NE	10.4	● a. p. ┬ a.
20	57.16	26.8	30.9	24.4	83.5	NE	12	7.5	Ci.	Cu.-N.,Fr.-N. NE,ENE	16.3	● a. p.
21	55.77	25.8	29	23.6	88.5	NE	10.6	9.8	Ci.-S.	Fr.-N. NNE	27.9	● a. p. ⌒ a.
22	54.98	25.4	29.5	23.5	91.8	SW quad.	8.9	9.7	Ci.-S.	Fr.-N. SW, SSW	4	● a.
23	57.88	27.4	31.1	24	86	E	7.7	4.2	A.-Cu. SE	Cu. SE, E	9.1	● a. p. ↙ p.
24	58.20	26.9	29.7	23.9	87.8	NE	7.4	5.5	Variable	Cu.,Cu.-N. ESE,E	22.4	● a. p.
25	58.20	26.4	29.1	23.9	86.2	NE	13.1	9.2	Ci.-S.	Cu.-N. NE, ENE	4.1	● a. p.
26	58.55	25.6	29.5	23.4	87.3	NE	9.7	9.5	Ci.-S.	Cu. ENE, NE	5.8	● p. d° a. p.
27	58.52	27	30	23.6	79.6	NE quad.	16.5	7.3	Ci.-S.	cu.-N.,cu.NE,ENE	7.6	d° p.
28	57.89	26.2	29	23.6	84.5	NE	14.1	9.3	Ci.-S.	Cu.-N. E	5.6	● a. p.
29	58.07	26.5	29.4	22.9	85.2	NE	10.9	7.8	Ci.-S.	Cu.-N. E, ESE	2.5	● a. ↙° p.
30	58.69	25.5	26.5	23.5	90.5	NE	10.7	10	Ci.-S.	N. ESE	41.6	● a. p. ┬° a.
Mean	757.51	26.3	30	23.4	85.6	----------	10.4	6.9	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	536.8	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	754.80	27	28.5	23.1	80.5	NE quad.	43.4	10	Ci.-S.	N. NE	10.5	↙ ● a. ↙° d² p.
2	57.08	26.8	29.2	23.9	80.5	S quad.	14.5	9.2	Ci.-S.	S.-Cu. NE, E	------	d a. ↙° p.
3	58.88	27.4	32.8	23.6	84.2	NE	11.6	7.8	Ci.	S.-Cu. NE	3.8	●° ┌◹ p.
4	59.11	27.4	31	24.6	83.8	NE quad.	14.6	6	A.-Cu. NE, ENE	S.-Cu. NE	1	d² ↙° p.
5	59.22	27.2	28.8	24	82.5	NE quad.	20.6	9.2	Ci.	S.-Cu. NE	15	● a. p.
6	59.13	27.4	30.7	23.8	82	NE	16.8	5.5	Ci. NE, E	Cu., S.-Cu. NE	------	d² p.
7	59.22	27.7	30.2	25	82	NE, N	17	5.8	A.-Cu. NE	S.-Cu. NE	1.3	●° a. ☋° p.
8	58.80	26.8	29.4	23.5	85.5	N	----------	6.7	Ci. N	S.-Cu. NE	2	●° ↙ p.
9	58.14	27.2	29	23.9	81.8	N quad.	----------	3.2	Ci.	Cu. NE	------	↙ ☋² p.
10	57.05	26.7	31	22.2	82	SW, N	8.2	3.8	Ci.	Cu. NE	------	↙° ☋° ⌣ p.
11	56.97	26.6	31	21.4	82	N quad.	9.2	7.3	Ci. SE quad.	S.-Cu. NW	10.2	☊° ○° a. ☋° ↙° ●p.
12	57.26	26	27.7	23.6	83.8	N quad.	35.6	9.8	Ci.	N., S.-Cu. NE	16	↙° ● a. p.
13	56.27	25.8	27.5	22.9	88.8	N	52.6	10	Ci.-S.	N. NNE, N	72	↙ ● a. p. ┌◹² p.
14	54.74	26	29	23.9	85.7	E	18.4	10	Ci.-S.	S.-Cu. SE	5.8	● ↙² p.
15	56.63	26.7	30.4	22	84.2	N quad.	9.6	4.8	Ci. SE	Cu. SE	------	☊ a. ┌◹° d² p. ☋°
16	57.62	26.7	29.8	22.8	84.8	NE	15.9	7.3	Ci.-S., Ci.	S.-Cu. NE	14.3	☋² ☊² ≡ a. ●° p.
17	57.78	26.7	29.2	23.7	86.4	N quad.	18.6	9.7	Ci.-S.	S.-Cu. NE	1.5	●° a. d² ☋° p. p.
18	59	25.9	29.7	22.4	89.4	NW	16.2	7.7	A.-Cu. SE	S.-Cu. NE	3.3	☋² ☊° ≡° a. ●p.
19	58.72	26.3	27.5	23.5	85.5	NE quad.	31.4	10	Ci.-Cu.	N. NE	55.1	↙° d² a. ┌◹² ●°
20	58.29	26	27.7	23.6	87.8	N quad.	25.6	9	Ci.	S.-Cu. NE	41.7	⌒° a. ● a. p.
21	57.46	26.2	27.9	23.3	83.7	N quad.	46.8	10	Ci.-S.	N. NE	37.3	↙° ●° a. ↙ p.
22	53.73	24	27.5	20.8	87	NW quad.	30.3	9.3	Ci.-S.	N. N	87.1	↙° a. ●° a. p.
23	57.70	25.2	28.5	21.5	89.3	SW	6.5	9.7	A.-Cu. SE	S.-Cu. SE	20.6	● ┌◹ ↙ p.
24	58.53	26.6	29.4	22.8	87.7	Variable	9	7.7	Ci. ENE	S.-Cu. NE	.8	○° a. d² ↙ p.
25	58.52	27.5	29.4	25	81.2	NE	20.5	7.7	Ci. ESE, SE	S.-Cu. NE	24.4	d a.
26	58.96	26.6	28.8	23.3	82.8	NE	17.9	8	Ci. E	S.-Cu. NE	18.5	● a.
27	59.24	26.4	28.9	23.9	82.9	NE	20.5	8.2	Ci. SE	Cu. NE	1	●° a. d² p.
28	58.68	25.9	27.2	23.5	84.2	NE	16.3	10	Ci.-S.	S.-Cu. NE quad.	13	d² a. p.
29	58.80	25.3	27.2	22.8	87	NE quad.	14.4	10	Ci.-S.	S.-Cu. NE	8.9	d a. p.
30	59.11	26.2	28.8	21	80.8	NE quad.	15	6.2	Ci. E	S.-Cu. NE	.8	d° p.
Mean	757.85	26.5	29.1	23.2	84.3	----------	20.6	8	----------	----------	------	
Total	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	465.9	

METEOROLOGICAL DATA, ETC.—Continued.

PARACALE.

[ϕ=14° 17′ N; λ=122° 47′ E; barometer above sea, 5.3 meters; gravity correction not applied, —1.73 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	755.07	26.3	29.8	23.8	87	E	3.7	9.7	Ci.-S.	Cu.-N. E	11.9	☾° ● a p. d p.
2	57.84	26.6	31.2	24.8	86.8	E quad.	1.5	9.2	Ci.	Cu.-N. SE	3.1	●° a. p. d° ☾ p.
3	58.97	26.6	30.9	24.2	91.1	ESE, SE	.3	7.7	----------	Cu. E	19.9	● d° a. p. ☾ p.
4	59.28	27.3	31.3	24.5	84.7	E, SE	1.2	4.5	Ci.	Cu. E	2.1	● a. ☾ p.
5	59.30	27	31	24.6	84.5	E quad.	1.3	6.7	Ci.	Cu., Cu.-N. E	6.7	● a. p. ◠° a. ☾ p.
6	59.14	26.5	30.5	23.2	87.2	E quad.	.8	7.5	Ci.-S.	Cu. E	12.2	● ☾ p.
7	59.31	26.5	30.3	24.2	89.2	E quad.	.7	6.5	Ci.	Cu.-N. E	46	● d° a. ☾ p.
8	58.97	26.4	30.8	23.4	87.8	ENE	.3	4.8	Ci.	Cu., Cu.-N. E	1.5	● p° a. ☾ p.
9	58.26	26.4	31.1	22.9	86	NE, ENE	.3	4.5	Ci.	Cu. E	------	p° a. ☾ p.
10	57.27	25.3	30.9	21.7	87.3	E, NEbyE	.3	3.3	Ci.	Cu. E	------	☊ a. ☋² ☾ p.
11	56.99	25.6	31.1	21.9	86.8	NE, ESE	.3	7	Ci.-S. SE	Cu.-N. NE	------	☊ ☋° a. ☋² ☋ p.
12	57.28	26.3	29.6	23.5	84.9	NE	1.8	9	Ci.-S.	Cu.-N. NE	36.9	● a. d ☾° ● p.
13	55.86	25.5	26.8	23.4	91.8	NE	2.8	10	----------	N. NE	130.7	☾° ● ⊤° a. p.
14	55.46	26.4	29.6	24.9	88.2	SW quad.	1	9.5	Ci.-S.	Cu.-N. SE	8.3	● a. p. d°a. ☋² p.
15	56.89	27.5	31.4	24	85	E quad.	1.2	6.5	A.-Cu. S	Cu. SE	------	☋ a. p.
16	57.91	26.6	30.4	25	86.2	E	1.8	7.7	Ci., Ci.-S.	Cu.-N. E	3	☋ a. ● p.
17	58.09	26.8	29.9	25	88.2	NE	1	9.2	Ci.-S.	Cu.-N. E quad.	7.6	●° a. ☋² ☋² p.
18	58.85	27	30.7	24	87.5	NE quad.	1	7.2	Ci.-S.	Cu. SE	37.4	● a. p. ⊤ ☾ p.
19	58.78	25	27.7	23.3	93.5	NE quad.	1.5	10	Ci.-S.	Cu.-N. NEbyN	47.5	● a. p. ⊤ a. ☾ p.
20	58.03	26.8	29.4	24.8	88.3	E quad.	2.3	6.8	Ci.	Cu. E	45.5	☋² a. ● a. p.
21	57.28	25.6	27.2	24.1	90.8	NE, NNE	2.8	10	----------	N. NE	132	● a. p.
22	53.46	25.5	27.8	24.2	88.3	Variable	1.8	9	Ci.-S., A.-Cu.	Cu. S	2	☾° ●² a. ☾ p.
23	57.76	27	30.9	23.8	85.8	E quad.	1	7.3	Variable	Cu. S, SE	------	☾ p.
24	58.50	26.7	31.3	23.7	88	ESE, ENE	.7	5.8	Ci.-Cu. SE	Cu. E	9.7	☊ a. ● ☾ p.
25	58.65	26.6	30.3	24	87	ENE	1.2	7.5	Ci.-S.	Cu.-N. E	3.1	○ ●° ☾ p.
26	59.03	26	30.9	23.2	86.9	E quad.	1.3	9.3	Ci.-S.	Cu.-N. ENE, E	20.9	● a. p. ☾ p.
27	59.14	26.2	30.7	22.9	85.3	E	1.7	7.3	Ci.	Cu. E	9.7	● a. p. ☾ p.
28	58.57	25.7	29	23.4	87.8	E	1.7	10	Ci.-S.	Cu.-N. E	51.3	● a. p. ☾ p.
29	58.68	25.1	27.3	23	90.2	SE	1.2	9.7	----------	Cu.-N. E	41.6	● a. p. ☾ p.
30	59.15	25.9	30.3	22.5	89.5	E quad.	.8	6	Ci.	Cu., Cu.-N. E	5.1	●° a. d° ☾ p.
Mean	757.93	26.3	30	23.7	87.7	----------	1.3	7.6	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	695.7	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	755.58	26	32.4	23.5	80.3	NE quad.	2.5	8.5	Ci.-S. SSW	N. E, ENE	2.8	d p° p.
2	57.18	25	27.9	23	86	E quad.	2.7	9.8	Ci.-S.	N. E quad.	9.9	☐☾ a. ● p. p° a. p.
3	58.83	25.9	30.2	22.5	84.2	ESE	1.8	8.3	A.-Cu. SE, S	Cu., S.-Cu. E	.8	● a.
4	59.22	24.5	27	23.2	91.2	Variable	.7	6.8	Ci.-S.	N. E	12.7	d ● a. ☾ d p.
5	59.30	25.5	31.6	21	80.8	E quad.	1.7	4.3	Ci. SE	S.-Cu. E	------	☊² a.
6	59.15	25.6	30.7	21	78	NW, ESE	1.7	5.5	Ci.-S., A.-Cu. SE	Cu. ENE, E	------	☊ a.
7	59.14	26.6	31.9	22	77.7	NW, ESE	1.3	6	Ci. SE	Cu. NE	2.5	☊ ⊕ a.
8	59.06	25.8	29.2	23.4	86.2	N quad.	1.2	7.7	Ci.-S. ESE	N.,S.-Cu. E quad.	.5	● a. d ☾ p.
9	58.08	26.1	32.3	22.6	81.8	SSW	1.2	6	Ci.-S. NE	N. SW	------	☊ a. ☐☾ ☾ p.
10	56.94	26	32	23	84.2	SSE, NW	1.2	7.8	Ci. ENE	N. ESE	3.9	☊ ☰°○ a. ☐☾ ● p.
11	56.94	25.3	31.3	22	87.3	Variable	1.2	6.7	Ci.-S. ESE, SE	Cu. NNE, NE	9.4	☰ a. ●² ◠ p.
12	57.51	25.2	28.8	23	82.6	E, ENE	1.5	7.7	Ci.-S. ESE, SE	Cu. NE	------	d° a.
13	57.16	25.5	29.2	22	73.8	NE, N	2.8	9	Ci.-S. SE	N.,Cu. NE	7.4	○° a. ● p.
14	55.13	24.1	27.1	22.4	90.8	NW, ENE	2.2	9.8	Ci.-S.	N. NE quad.	35.8	●² a. ● p.
15	56.23	26.5	31.5	22	79	SE	1.7	5.3	A.-Cu. SW, E	Cu. SE	------	☊² a. ☋ p.
16	57.62	25.8	30.8	22.5	80.1	E quad	2	6.8	Ci.-S. SSE	Cu. E, ENE	1.8	☊ ○° a. d p.
17	58.19	24.1	26.7	21.5	88.7	N quad	1.3	10	Ci.-S. SSE	N. ENE	11.7	d°● a.
18	58.94	25.4	29.7	22.5	85	Variable	1	8.3	A.-Cu. SE	Cu. E	------	●² a. ☋° ☾ p.
19	58.44	25.7	30.7	23.5	81.7	NW	1.2	8.3	Ci.-S. SSE	S.-Cu. NE	------	⊕° a. ○° p.
20	58.35	25.4	29.3	22.5	84.6	E quad	1.2	7.7	Ci.-S. SE	N.,Cu. E quad.	.3	d° a.
21	57.66	25.8	29.4	23	74.2	NW quad	2.5	6.8	Ci.-S. SE	Cu. NE	------	
22	55.04	23.6	26.2	21.2	83.8	NNW	3.7	10	Ci.-S., A.-S.	N. NE	13	d° ●° a. ☾° p.
23	57.20	25.4	30.2	22	84.8	SE quad.	1.7	8.2	Ci.-S.	Cu. SE	5.1	◠² a. ☐☾ d●° p.
24	58.35	25.8	30	23.5	85.5	E quad.	1.7	7	Ci.-S. SE	Cu. E	.8	●° ◠² a. ☾ p.
25	58.42	25.4	30	21.5	79.3	E quad.	2	6	Ci.-S. SE	Cu. E, NE	------	☊² a. ○° p.
26	59.05	24.6	29.1	21	83.7	E quad.	1.5	5.8	Ci.-S. SE	S.-Cu. E	------	☊ a. p. ○° a.
27	59.32	24.9	30.3	21	81.7	ESE, NW	1.3	5.5	Ci. SE	Cu. E	.3	☊² a. ●° p.
28	58.84	25.2	29.7	22	79.5	NW quad.	1.7	7.7	Ci.-S. SE	N. E, ENE	------	
29	58.52	25.2	30.7	21.4	78.7	N quad.	1.5	6	Ci.-S. SE	Cu. E	1.3	☊ a. ●° p.
30	59.01	25.9	31.1	22.5	78.6	NW, ESE	1.5	5.7	Ci. SE	Cu. E, ENE	------	● a. ☊ p.
Mean	757.95	25.4	29.9	22.3	82.5	----------	1.7	7.3	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	-------	----------	----------	120	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	755.42	27.8	33.9	23.6	78.7	SE	8.3	8	Ci.-S., A.-Cu.	S.-Cu. SE, E	------	☾ p.
2	56.83	26.3	31.6	23.2	83.3	SE	13.8	10	------	S.-Cu. SE, ESE	3.9	d a. p.
3	58.13	27.3	34.1	23	81.8	SE, SSE	15.3	9.7	A.-Cu.	S.-Cu. SE, SSE	------	☌° a. ☇ p.
4	58.72	26.4	31.6	23.9	85.7	SE quad.	9.8	6.8	Ci., A.-Cu.	S.-Cu. SE	------	☇° a. p.
5	59.02	27	32.4	22.5	85.1	Variable	8.9	2.3	Ci.	Cu., S.-Cu.	------	☇° p.
6	58.94	27	34.2	21.7	79.8	S quad.	7.7	3.5	Ci.	Cu., S.-Cu.	------	
7	58.99	27.4	34.2	22.2	80.8	Variable	7.6	1.8	Ci.	S.-Cu.	------	
8	58.79	27.4	34.4	23.3	84.7	Variable	6.6	6.2	Ci.	S.-Cu. E	.8	⊢° ☇ d² p.
9	57.95	27.6	32.6	23.4	84.5	SE, NW	9.5	6.3	Ci., Ci.-S.	S.-Cu.	------	⊢° ☇° p.
10	56.85	27.2	31.1	23.8	87.5	NW	11	7.5	Ci., A.-Cu.	S.-Cu.	6.6	☇° p° p.
11	56.86	26.5	31.1	23.2	89.3	Variable	7.9	7.5	Ci., Ci.-S.	Cu. NW	------	☋ p.
12	57.29	26	31.9	23.1	89.3	SE, NW	5.7	7.2	A.-Cu.	S.-Cu. SE	------	☋ p.
13	57.22	25.9	31.1	21.8	87.8	SE, N	5.2	8.5	A.-Cu.	Cu., S.-Cu.	2.5	☽° ☋ p.
14	54.96	25.8	29.9	23.4	90	NW	8.9	10	A.-Cu.	S.-Cu. N, E	------	p° a. ☽° p.
15	55.85	27.9	33.7	24.1	81	SE quad.	13.3	5.3	Ci.	Cu., S.-Cu. SE	------	☋ p.
16	57.22	27.5	34.7	22.9	79.7	SE	10.7	5.5	Ci.	Cu., S.-Cu.	2.6	☽° p.
17	58.07	25	29.1	22.4	93	S, W	4.3	9.8	A.-Cu.	S.-Cu. SE	1.5	d² p° a. ☽° p.
18	58.78	26.4	31	22.8	87.7	Variable	6.3	9.2	A.-Cu.	S.-Cu. E	.5	d° a. ☋ p.
19	58.06	27.2	33.8	24	84.8	Variable	8	8.7	A.-Cu.	S.-Cu. E	3.3	☋ a. ●° p.
20	58.30	26.1	31.2	22	87.9	SE, NW	6.6	6.8	Ci.-S., A.-Cu.	Cu., S.-Cu.	------	d a. ☋ p.
21	57.57	26.9	34.1	22.7	87	Variable	6.3	6.2	Ci.	S.-Cu. E	------	☋° a.
22	55.21	25.5	27.8	23.2	89.2	NW, SE	11.5	10	------	S.-Cu., N. NE, NW	.8	d° a. p.
23	56.61	26.6	32.6	23.1	83.2	SE, SSE	15.8	8.3	Variable	S.-Cu. SE	------	☋° a. ☇ p.
24	57.89	27.3	33.6	24.5	83.1	SE	10	6.8	Ci., A.-Cu.	S.-Cu.	------	⊢° ☇ p.
25	58.03	27.1	34.6	22.8	80.3	SE	9.9	5.3	Ci.-S., A.-Cu.	S.-Cu. ESE	------	
26	58.81	26.2	32.4	21.9	81.8	S	5.3	6.5	Ci., A.-Cu.	S.-Cu. E	------	
27	58.82	26	33.3	21.4	81.7	SE quad.	7.5	4.7	Ci., A.-Cu.	S.-Cu.	------	
28	58.70	25.3	30.8	20.6	86.4	NW	6.5	5.5	Ci., A.-Cu.	Cu., S.-Cu.	------	
29	58.39	25.4	33.3	20.5	84.7	Variable	6.2	4.3	Ci.-S.	Cu., S.-Cu.	------	
30	59.05	25.4	32.4	21	86.1	SE, NW	8.1	4.8	Ci., A.-Cu.	Cu., S.-Cu.	------	
Mean	757.71	26.6	32.4	22.7	84.9	------	8.8	6.8	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	22.5	

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 7.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	755.23	27.7	32.4	23	81.7	S	1.5	10	Ci.-S.	S.-Cu.	------	☊ ☰° a. ☾² p.
2	56.39	26	29.9	23.6	86.5	SE quad.	3	10	Ci.-S.	Variable	6.4	☊ a. d p p.
3	57.98	26.6	31.6	23.4	87	SE quad.	2.2	10	A.-Cu., Ci.-S.	S.-Cu.	------	p ☊° a. d p.
4	58.47	26.5	31.2	22.8	86.5	SE quad.	1.8	9	Ci.-S.	S.-Cu.	------	☈° ☊° a. d ☇ p.
5	58.89	27.2	31.9	21.8	81	Variable	2.2	9.2	Ci.-S.	S.-Cu.	------	☇ ☊ ☰° a.
6	58.70	27.1	33.5	22.7	79.2	SE quad.	2.3	8.5	Ci.-S.	Cu.	------	☊ ☰° a.
7	58.88	27.2	32.6	22	78	N	1.5	2.2	Ci.-S.	S.-Cu., Cu.	------	☊ ☰° a.
8	58.59	27.7	34	23.4	82.3	SSE	1.7	7	Ci.-S.	S.-Cu.	------	☊° a. ☈ ☇ p.
9	57.91	27.8	31.7	24	82.2	Variable	2.5	9.7	Ci.-S.	Fr.-Cu. N	.5	☊° a. ☾° a. p.
10	56.91	27.5	30.5	25	81.2	NNE	3.7	10	Ci.-S.	Cu. N	2.5	● ☊° a. d ☋° p.
11	56.72	27.5	30.2	26.1	82.1	NE quad.	4.3	9.5	Ci.-S.	Cu. N	.3	☊° d a. ☇° a. p.
12	57.13	27.7	31.5	25.2	77.9	N	3.5	9.2	Ci.-S.	S.-Cu.	------	d a. ☇° p.
13	57.03	26.8	30.4	22.7	78	N quad.	3.2	10	Ci.-S.	Cu.	------	☊ ☰° a. ☾° ☇° p.
14	54.83	26	29.1	24.4	88.5	NNE	1.7	10	Ci.-S.	S.-Cu., N.-cf.	.8	d a. p. ☋° ☽° p.
15	55.54	28	34	24.7	76.7	SE	3.5	9.2	Ci.-S.	S.-Cu.	------	p a. ☇° a. p.
16	57.02	27.3	33.4	22.8	82.6	Variable	1.8	9.7	Ci.-S.	S.-Cu., Cu.	1.3	☊ ☰° a. d p.
17	58.07	25.6	27.1	24.2	85.5	NE	3.5	10	------	N.-cf. NE	1.5	d ●° a. ☇° ☋° p.
18	58.74	26.8	30.4	23.9	82.1	NNE	3	10	A.-Cu.	Cu. NE	------	☋° ☊ ☰° d a. ☇° p.
19	58.02	27.8	31.1	25.1	79.2	NNE	3.7	10	Ci.-S.	N.-cf. NE	4.8	☇° a.
20	58.13	25.9	30.4	22.8	87.7	SE quad.	1.5	9.8	Ci.-S.	N.-cf.	------	●° a.
21	57.50	26.8	32.1	22.6	82.8	SSE, NNE	2	9.5	Ci.-S.	Cu.	------	☊ ☰° a.
22	55.09	26.8	28.1	24.9	78.5	NNE	4.2	10	Ci.-S.	N.	3.6	☽² a. ☇° a. p. ● p
23	56.20	27	32.1	24.1	80.5	SSE	3.3	10	Ci.-S.	N.-cf.	------	☇° a. p.
24	57.85	27.3	33.5	23.4	84	SE quad.	1.3	9.3	Ci.-S.	S.-Cu. SE	------	☊° a. ☈ ☇ p.
25	57.88	27	33.4	22.7	83	SE quad.	1.7	9.8	Ci.-S.	Cu. E	------	☊ ☰° a.
26	58.61	26.4	32.9	23.1	80.8	SSE, SE	2	10	Ci.-S.	S.-Cu., Cu.	------	☊ ☰° a. ☾² p.
27	58.81	25.8	32.9	21.6	81.9	SSE	1.8	9.2	Ci.-S.	Cu., S.-Cu.	------	☊ ☰° a.
28	58.62	25.3	30.8	21.4	82.3	N	2	10	Ci.-S.	Cu. NE	------	☊ ☰° a. ☾° a. p.
29	58.19	25.2	31.6	20.9	82.9	SE quad.	2.2	8.7	Ci.-S.	Cu., S.-Cu.	------	☊² ☰ a.
30	58.90	25	31.3	20	82	Variable	1.7	10	Ci.-S.	S.-Cu., Cu.	------	☊² ☰ ☾° a.
Mean	757.56	26.8	31.5	23.3	82.2	------	2.5	9.3	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	21.7	

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.[1]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	634.36	18.5	23.5	16.2	80.1	E	18.6	9.7	A.-S.	S.-Cu. E	0.3	d ∩ p.
2	34.76	16.9	18.9	15.5	88.2	E	48.8	9.9	Ci.-S.	S.-Cu. ESE	4.9	d a. ● p. ↙ a. p.
3	36.35	18.7	22.6	15.7	80.3	E quad.	29.3	9.1	A.-Cu. S, SSE	S.-Cu.	------	d p.
4	36.79	18.1	20.7	16.4	83.5	E	13.5	8	A.-Cu. SE, quad.	S.-Cu. E	------	d² a.
5	36.97	17.9	23.7	14.9	87.9	SE quad.	11.1	6.1	Ci.	S.-Cu. ENE	------	♌ a. ≡² p.
6	36.82	18.4	23.5	14.9	69.2	E quad.	10.6	6.1	Ci. E	Cu.	------	≡° p.
7	37.07	18.3	23.7	15.5	84.8	E quad.	10.6	4	Ci.	Cu. SE	------	♌° a. ≡² p.
8	36.83	18.4	23.7	16	89.7	W quad.	11.1	6.9	Ci.	S.-Cu. E	4.2	♌° a ≡² p² ┬° d p.
9	36.12	18.2	23.2	16	91.3	Variable	8.8	7.7	Ci. NE	S.-Cu. NE	7.9	♌ a. ≡² d² ● p.
10	35.05	18.2	23.5	16	91.1	E quad.	8.6	8.4	Ci. SSW	Cu.-N. W	------	┬ a. d ◪ p. ≡²
11	34.96	18.4	23.3	15.5	88.7	Variable	9.9	7.9	A.-Cu. WSW	Cu. NE	------	♌ a. ≡ p.
12	35.32	17.1	20.2	15.2	90.3	E, W	9.3	9.6	Ci. NE	S.-Cu. E	19.3	♌² a. ● p. ≡ a. p.
13	35.29	17.6	21.6	15.1	82.3	E quad.	8.9	9.9	A.-Cu. ESE	Cu.	2.5	◯° a. ≡° p.
14	33.48	18.3	21.7	16.4	85.8	E	18.2	10	A.-Cu. E	Fr.-N. E	1.9	d ● a. p.
15	34.58	18.4	22.1	16	84	ESE	18.5	6.4	A.-Cu. SE	S.-Cu. SE	------	♍² p.
16	35.60	18.3	22.3	14.7	74.2	E	17.6	8.6	Ci.	S.-Cu. ESE, E	10.9	♌° a. ●° p.
17	35.78	16.4	18.6	14.3	86.8	E	18.8	10	A.-S.	Fr.-N. SE	4.3	●° a. d p.
18	36.55	18.5	22.8	16	81.5	E	13.1	9.4	A.-Cu.	Cu. ENE	------	●° a.
19	36.31	19	23.4	16.3	75.3	SE quad.	12.2	9	A.-Cu. NE	S.-Cu. ENE	10.4	●° p.
20	36.16	17.7	21.8	15	84.5	E	11.9	8.4	A.-Cu. ENE	S.-Cu. ENE	2.5	● a.
21	35.90	18.6	23.9	16.3	70.7	E quad.	10	8.7	Ci.-S. E	Cu.	------	≡² p.
22	33.44	17.8	19.3	16	78	E quad.	13.9	10	A.-S.	Fr.-N. ENE	2.9	● d a. p. ⊕ p.
23	34.95	18	21	16	89.5	E	16.5	9.7	A.-S.	Fr.-N. ESE	------	⊕ a.
24	36.35	19	23.5	16.4	86.5	E quad.	13.3	7.6	Ci., Ci.-Cu.	Cu., S.-Cu. ESE	------	≡° ┬ p.
25	36.34	18.3	23.1	16	77.5	SE quad.	13.3	7.7	Ci.-Cu. E	Fr.-Cu. E, ESE	1	d° p p.
26	36.68	17.6	23.1	15.2	79.2	E quad.	9.2	9	Ci.-S. SSE	Cu.	------	♌ a. ◯° ♆ p.
27	36.57	17.8	23.6	14.4	70.2	E, ESE	13.7	6	Ci.	S.-Cu. E	------	♌ a. ⊕ a. p.
28	36.44	17.5	22.6	14.5	74.8	E quad.	12.6	8.7	Ci.-S. SSE	S.-Cu. E	------	
29	36.23	17.6	23.5	13.5	56.3	E	13.6	5	Ci.-S.	Cu.	------	
30	36.83	18.4	23.6	15.3	69.9	E, SE	12.1	8.6	Ci.-S.	Cu. ESE	------	◯° p.
Mean	635.83	18.1	22.4	15.5	81.1	----------	14.6	8.2	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	73	

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	755.61	28.7	33.5	24	67.2	N quad.	2.7	3	Ci.-S.	S.-Cu., Cu.	------	
2	56.38	30.1	36.5	25	61.2	N quad.	2.2	5.2	Ci.-S.	S.-Cu., Cu.	------	
3	58.20	28.5	34	25.4	70.6	N quad.	1	8.5	Ci.-S., A.-Cu.	S.-Cu.	------	
4	58.77	28.1	33.9	25.1	72.4	Variable	.5	7.5	A.-Cu.	S.-Cu.	------	
5	59.20	27.2	32.4	23.9	78.8	NW quad.	.8	.2	Ci.-S.	S.-Cu.	------	♌ ≡ a.
6	58.96	27.2	32.6	22.9	74.2	Variable	.8	.2	Ci., Ci.-S.	Cu.	------	≡° a.
7	59.24	27.2	32.1	23.5	80	Variable	1	3	Ci.-S., Ci.	Cu.	------	♌ a.
8	58.81	27.5	32.6	23.4	77.2	Variable	.8	.7	Variable.	S.-Cu., Cu.	------	♌ ≡° a. ♍ ◟° p.
9	58.22	27.2	32.8	23.4	78	N quad.	1	.5	Ci.-S., Ci.	Cu.	0.5	♌° a. ●° ♍ p.
10	57.04	26.1	30.1	22.5	81.5	N	1.8	.8	Ci.-S.	Cu.	------	♍ p.
11	57.08	25.4	30	22	78.7	N	1.8	.5	Ci.-S.	Cu.	------	♌ a.
12	57.67	25.6	31.2	21.8	69.2	N	2	5	Ci.-S., A.-Cu.	Cu.	------	d° ∩ p.
13	57.54	27.5	31.4	23.4	54.3	NE	2.7	5.8	Ci.-S.	S.-Cu.	------	
14	55.20	25.4	28.7	23	84.5	NE quad.	1.3	9.7	Ci.-S.	S.-Cu., Cu.-N.	1.8	d ● a.
15	56.10	27.9	32.9	23	81.5	Variable	1	5.7	Ci.-S., A.-Cu.	Cu. N	------	♍ p.
16	57.36	27.6	34.7	23.5	67.3	NE quad.	1.8	2	Ci.-S.	Cu.	------	◟ a.
17	59.40	22.8	24.8	21.8	90.8	NE quad.	2	8.7	Ci.-S., A.-Cu.	N. NbyE	37.5	d ● a. ● p.
18	59.72	24.9	28	22	82.2	N quad.	1.2	9.5	A.-Cu., Ci.-S.	Cu.	------	d° a.
19	58.64	26.9	32.2	23.4	65.3	NNE	1.7	7.5	Ci.-S.	S.-Cu.	------	
20	58.39	26.9	30.9	24.2	76.2	N	1.2	4.3	Ci.-S.	S.-Cu.	------	
21	58.34	27.8	32.1	23.1	56.7	NNE	2	1.5	Ci.-S.	Cu.	------	
22	55.80	26	29.1	22.4	70.5	NE quad.	2.7	8.3	Ci.-S.	Cu.-N. NE	1.3	d° p.
23	56.76	26.8	29.4	24.7	85.7	Variable	.7	8.3	Ci.-S.	S.-Cu.	------	
24	58.30	27.1	31.9	23.2	82.3	SE quad.	1	3	Ci.-S.	S.-Cu., Cu.	------	♍ ♌ a.
25	58.29	26.8	31.1	23.6	86.4	Variable	1	1	Ci.-S.	S.-Cu.	------	
26	58.95	26.5	31.9	23.3	75.2	Variable	.7	2.5	Ci.-S.	S.-Cu.	------	
27	59.02	26.1	30.9	21.9	75.2	NW quad.	1	0	Ci.-S.	Cu., S.-Cu.	------	
28	58.92	25.4	31.1	21.3	84.2	NW quad.	.7	.2	Ci.-S.	Cu.	------	♌ a.
29	58.65	25.7	31.1	21	80.2	Variable	.7	.2	Ci.-S.	S.-Cu., Cu.	------	
30	59.20	25.3	31.3	20.8	80.2	NE quad.	.8	0	Ci.-S., Ci.	Cu.	------	♌ a.
Mean	757.99	26.7	31.5	23.1	75.6	----------	1.4	3.8	----------	----------	------	
Total	--------	------	------	------	------	----------	------	------	----------	----------	41.1	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.71	25.8	31.4	22.3	89	NE, NW	1	8.8	Ci.	Cu.-N. E, NE	16.8	d ● a. d p.
2	59.07	25.8	30.3	23	89.8	Calm	0	9.3	----------	N., Cu.-N. SW, NE	52.6	● a. p.
3	60.42	24.8	29	22.4	92.7	NE	.5	9	----------	Cu.-N. E	4.8	● a.
4	60.29	25.9	31.3	22.5	87.7	E	.2	5.5	Ci.	Cu. E	------	d a. p. ⌒^{2} ↙ p.
5	60.24	26.4	32.7	22.1	83.8	NW	.5	5.2	A.-S., Ci.	Cu. ENE, NW	------	☊ ≡° a.
6	60.01	25.7	31.9	20.7	86	SE	.2	7.3	----------	Cu.-N. S	------	☊^{2} a. d a. p.
7	60.32	26.2	32.3	22.5	87	SE	.2	8.5	Ci.-S.	Cu.-N., N.	10.2	☊ a. ● p.
8	59.21	27.4	33.7	23.5	82.5	S	.2	7	----------	Cu.-N. S	------	⌐◹ p.
9	58.05	27.6	33.6	23	83	NW	.8	5.7	A.-Cu., Ci.	Cu.-N. NW	1.8	☊ a. ⌐◹ ● p.
10	57.32	25.8	31.8	22.6	87.5	NW	1.2	7.2	Ci., Ci.-S.	Cu.-N. N	12.7	d p.
11	58.39	23.1	25.4	21.5	95.2	NW	2.7	10	----------	Cu.-N. NW	3	d ● a. p.
12	59.69	22.9	25.7	20.8	89.3	NW	2.3	10	----------	S.-Cu. N	------	
13	59.89	23.8	26.9	20.6	85.8	NW	2.2	9.7	A.-S.	S.-Cu. NW	26.7	☊ a. d ● p.
14	57.26	23.4	25.1	22.2	99	NW, NE	1	10	----------	N.	19.8	↙° a. ● a. p.
15	57.28	25.2	29.8	22.1	91.8	SW	.2	8.3	Ci. NE	S.-Cu. S	------	≡° p.
16	59.09	25.8	32	22.4	84.2	NE	.7	5.5	Ci.	Cu.	24.7	☊^{2} ≡ a. ● p.
17	60.33	21.9	24.2	21	98.7	NW, NE	1.7	9.7	Ci.-S.	N.	170.2	●^{2} a. p. ⌐◹^{3} ⊤ p.
18	61.16	22	23.4	21	94.5	NW	3	9.7	Ci.	Cu.-N. NW	14.5	● a. p.
19	60.94	23.1	25.4	21	91.2	NW	2.3	9.8	Ci.-S., Ci.	Cu.-N. NW	3.8	d a. d ● p.
20	60.02	24.7	28.9	21.6	87.1	NW	1.8	7.7	Ci.	Cu.-N. N	------	d ⌒ a.
21	60.50	25.3	28.7	22.5	83	NW	2.7	5	Ci. NE	Cu. NE, E	------	☊ a·
22	57.60	24.1	25	22	92.8	NW	2	9.5	----------	N. E, N	65.6	d ● a. ●^{2} ⌐◹ p.
23	58.40	24.8	27.2	23	94.2	Calm	0	9.5	Ci.	Cu.-N. S	4.6	● ≡ a. d p.
24	59.14	25.8	29.9	22.7	90.2	Calm	0	7.2	Ci. NE	Cu.-N. SE, S	5.9	☊ ≡ a. ● p.
25	59.45	26.5	32.3	23.1	86.7	SE	.3	6.8	Ci.-Cu., Ci.	Cu.-N. SE	3.8	d a. ● a. p.
26	60.30	24.8	30.2	20.5	87.9	Calm	0	5.3	----------	Cu.-N. E	------	☊^{2} ≡° a. d p.
27	60.42	25	31.6	21.4	86.2	S	.2	6.3	Ci.	Cu.-N. N	------	☊ a.
28	59.80	25.2	32.7	20.3	84.2	Calm	0	4.7	Ci. N	Fr.-Cu. S	------	☊^{2} a.
29	59.78	25	32	19.5	86.2	SE, SW	.3	4.3	Ci. NE	Cu. NE, S	------	☊^{2} a.
30	59.93	25.1	32.4	20.5	88.2	Calm	0	5.2	A.-Cu. ESE	Cu. SW	------	☊^{2} a.
Mean	759.40	25	29.6	21.8	88.8	----------	.9	7.6	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	441.5	

APARRI.

[ϕ—18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.48	26.8	29.4	24	86.8	NE	17.3	7	Ci.	Cu.-N. NE	7.6	● a.
2	59.47	26.6	29.9	24	86.8	NE	16.7	7.5	Ci., A.-Cu. S, E	S.-Cu. E	3.8	
3	61.02	24.8	27.2	23.2	92.8	NE	12	9.7	----------	S.-Cu., N. E	8.4	● a. p.
4	60.81	24.9	28.3	22.6	89.3	SE, E	5.7	7.7	----------	S.-Cu., Cu.-N. SE	2.8	● a. p.
5	60.85	25.5	29.5	21.9	85.7	NE, S	7	2.3	----------	S.-Cu.	2.3	☊ a.
6	60.44	24.9	29.5	23.2	90.7	Variable	9.3	10	----------	S.-Cu., Cu.-N. E, SE	2.6	●° a. p.
7	60.71	25.6	30	23	87.7	SW, E	6.2	4.2	A.-Cu. E	S.-Cu. E	------	●° a. ↙ p.
8	59.46	26.3	31	22.4	84.1	S, NE	7.4	2.5	Ci.-S. W	S.-Cu.	------	☊ a. ⌐◹ ↙ p.
9	58.40	27.1	31.5	23.6	83.8	Variable	7.2	4.8	Ci.-S. SW	Cu. SE	6.8	↙ a. p. ⌐◹ p.
10	57.95	25.3	28.5	23.2	88.5	N quad.	13.5	10	----------	Cu.-N., N. NE	88.6	● a. ●^{2} p.
11	59.29	24	27	22.5	83	NE	24.5	10	----------	N. NE	12.7	● a. p.
12	60.64	23.4	24.9	21.2	82.8	NE	21.6	10	----------	N. NE	33.1	● a. p.
13	60.97	24.1	26.5	21.6	81.3	NE	23.1	10	----------	S.-Cu. NE	5.7	●° a. p.
14	57.62	24.6	26.4	23	94.5	NE, E	----------	10	----------	N. NE, E	21.1	● a. p.
15	57.54	25.1	28.5	22.4	91.8	E	2.5	8.5	Ci.-S.	S.-Cu. SW	.8	●° a. ↙ p.
16	59.91	25.7	29.2	22	87.7	NE, E	17.6	7.5	Ci.	S.-Cu., Cu.-N. E, NE	50.6	● a. ⌒ ●^{2} p.
17	61.48	23.2	24.8	21.8	94	NE	36.3	10	----------	N. NE	287.7	●^{2} a. p.
18	62.60	22.8	24	21.6	93	NE	----------	10	----------	N. NE	13.4	●^{2} a. ● p.
19	62.30	23	24.2	21.6	89.7	NE	----------	10	----------	N. NE	12.7	● a. p.
20	61.29	24.4	26.6	22.1	89.5	NE, E	23.6	9.7	----------	S.-Cu., N. NE	5.1	●° a. p.
21	61.66	25.5	28.7	23	77	NE	18.2	7.7	Ci.-S.	S.-Cu., Cu.-N. E, NE	------	
22	58.95	25	26.4	23.6	85.8	NE	29.2	10	Ci.-S.	S.-Cu., N. NE	34	●° a. p.
23	58.68	24.8	26.5	23.6	92.7	NE, SE	9.2	8.8	Ci.-S.	S.-Cu., N. SE	3.8	● a.
24	59.47	25.2	28.1	22.6	88.5	SE	5.9	7.8	----------	S.-Cu. SE	1.8	● p.
25	59.89	25.5	28.8	22.5	87.7	SW, E	11.5	4.3	A.-Cu. SE	S.-Cu. S	------	●° a.
26	60.60	25.3	29.4	21.8	87.7	E quad.	----------	1.5	A.-Cu. SE	S.-Cu., Cu.-N.	------	☊ a.
27	60.69	25.4	29.4	22	84.8	Variable	9.2	.2	Ci.	----------	------	☊ ≡ a.
28	60.18	25.2	29.5	21.2	83.3	E, S	7.1	.7	Ci.	----------	------	☊ ≡ a.
29	59.94	25.3	30	21.6	82.9	SE quad.	8.3	0	----------	----------	------	☊ ≡ a.
30	60.10	25.3	29.1	22	85.4	SE, E	8.1	1.8	----------	Cu.-N. SE	2	☊ ≡ a. ● p.
Mean	760.05	25	28.1	22.5	87.3	----------	13.3	6.8	----------	----------	------	
Total	-------	------	------	------	------	----------	-------	------	----------	----------	607.4	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

JOLO.

[$\phi = 6°\ 03'$ N; $\lambda = 120°\ 00'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.2	22.3	93	79	10	10	------	●° a. p p.
2	30.2	22	87	81	10	10	16.8	○² ●² p.
3	30.5	21.5	96	93	5	10	18	p a. ●² p.
4	------	21.3	97	72	7	7	37.6	d ●° a. ↙² p.
5	31.1	22.2	94	75	10	10	66.6	●² a. ● ⊕² p.
6	30.5	21.3	92	90	9	10	46.5	●² a. p.
7	28.9	21.9	96	85	10	10	18.8	●° a. ○° ● p.
8	29.7	20	95	93	10	10	16.5	d a. ● a. p.
9	31.5	21.4	93	90	10	10	24.4	● ⊕ a. ●² ⊽² p.
10	29.6	22.2	89	86	10	10	------	⊽ p.
11	------	21.8	86	69	10	7	16.8?	● a.
12	28.2	21.5	92	91	8	10	3.6	●° ⊕² a. ⊽² p.
13	29.9	22.6	92	89	10	10	64.5	●° d a. ●² p.
14	29.9	23.1	93	85	10	10	------	●² a.
15	30.8	22.8	92	76	8	6	------	d ⊕² a. ⊽² p.
16	29.9	23.8	93	94	8	10	16.3	● p.
17	29.1	22.6	96	94	10	6	------	
18	29.5	22.5	96	90	10	10	------	
19	29.2	23.4	95	89	7	10	------	
20	30	23.1	94	87	10	10	20.6	
21	29.6	22.9	94	86	10	10	------	● a.
22	29.8	23.4	87	90	10	8	------	
23	29.8	22.1	92	88	6	10	8.1	● a.
24	32.2	22.8	95	87	10	10	------	↙² p.
25	32.4	23.7	92	91	10	10	20.3	● a. p.
26	30.1	22.9	92	82	10	10	12.4	● a. p.
27	29.6	22.7	91	82	10	10	28.4	d a. ● p.
28	29.2	22.4	92	87	10	10	29.2	● a. p.
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
Mean	30	22.4	92.7	85.8	9.2	9.4	------	
Total	------	------	------	------	------	------	465.4[1]	

ISABELA, BASILAN.

[$\phi = 6°\ 42'$ N; $\lambda = 121°\ 58'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.8	23	96	86	10	10	7.1	p p.
2	28.3	23	97	88	10	10	19.8	● a. p.
3	31.3	21.5	92	81	3	4	------	☊ a.
4	30.3	22.5	96	77	5	6	------	☊ a.
5	31.8	22	96	78	10	10	1	☊ a. ●° p.
6	------	22.4	96	75	9	9	7.4	☊ a. ⌐◪ ● p.
7	29.3	21	96	92	10	10	34.2	●° a. ● p.
8	29.9	22	96	84	10	10	15	d a. ● a. p.
9	29.6	23	95	85	10	10	13.7	d a. ● p.
10	29.9	22.6	96	83	10	10	54.3	d a. ●² p.
11	29.3	23	97	84	10	10	21.3	d ●° a. ↙° ● p.
12	29.8	22.2	97	85	10	10	17	d a. ↙° ● p.
13	29.6	22.5	96	81	10	10	26.9	d a. ↙° ● p.
14	30.3	22	95	88	10	10	31	d a. ↙° ● p.
15	30.5	23	96	85	10	8	1	d ●° a.
16	30.3	23	96	92	10	10	3	p° ● p.
17	30.3	23	97	77	1	9	------	☊ a.
18	29.8	22.5	96	85	8	6	------	☊ a.
19	30.3	23.5	96	85	10	9	8	d a. ●° p.
20	29.8	22.8	96	85	10	10	------	☊ a.
21	30.1	23	97	85	10	9	9.4	☊ a. ● p.
22	29.3	24	97	84	10	10	3	d a. ● p.
23	30.8	22	96	88	1	7	------	☊ a.
24	30.4	22.3	96	80	2	6	------	☊ a. ↖ p.
25	29.8	22.4	97	96	10	10	28.7	☊ a. ● p.
26	27.8	22.5	96	84	10	10	14	● a. d a. p.
27	28.8	22	96	81	10	10	25.2	d a. ● p.
28	28.3	23	95	81	10	10	.8	d a. ●° p.
29	29.8	23.3	96	85	10	10	.5	☊ a. ●° p.
30	29.8	23	97	81	10	10	------	p° a.
Mean	29.8	22.6	96	84	8.6	9.1	------	
Total	------	------	------	------	------	------	335.1	

ZAMBOANGA.

[$\phi = 6°\ 54'$ N; $\lambda = 122°\ 05'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.1	24.5	88	84	10	10	3.5	●° a. p. ↙° ↘ p.
2	28	23.5	86	95	10	10	49	p a. ●² p.
3	31.6	22	90	79	5	9	------	☊° a. ●° p.
4	30.9	22.6	90	71	2	8	5.1	☊° a. p p.
5	30.2	23.5	97	80	9	9	------	⌐◪ a.
6	31	23	90	71	10	8	2.3	⌐◪ p.
7	29	23.4	95	79	10	10	14.5	● a. d p.
8	28.4	23	90	79	10	9	2.5	● a. d a. p.
9	30.4	20.4	95	77	10	9	.5	d p.
10	30	22.5	91	100	10	10	40.7	☊° a. ● a. p.
11	28.9	18.5	87	78	10	7	6.6	d a. p.
12	28	21	92	77	8	10	------	☊ ⌐◪ a.
13	27.9	22.4	88	98	8	10	62.2	●² ↘ p.
14	28.6	23	91	82	10	10	5.1	● a. d a. p.
15	30.6	22.8	89	79	10	8	------	⌒ a.
16	28.5	23.5	89	88	10	10	9.7	⌐◪ a. ● a. p.
17	30.4	22.5	94	67	5	6	------	☊° a. ⌐◪ p.
18	29.1	22.8	90	81	10	10	------	☊° a.
19	29.1	23.4	91	82	9	10	3.6	⌐◪ ●° p.
20	28.9	22.5	91	71	9	9	------	
21	28.9	23	91	79	7	6	6.1	● p.
22	28.9	23.5	94	82	8	5	1.3	d ● p.
23	29.6	23	91	77	7	9	------	d a.
24	30.4	22.4	89	90	10	9	4.3	☊° a. ● p.
25	27.5	22.5	87	92	10	10	1.3	d a. p p.
26	27.5	22.5	88	97	10	10	5.1	● p.
27	28.4	22.4	91	80	10	10	4.1	⊤ a. d a. p.
28	29.2	22.9	87	71	10	10	11.2	● a. p.
29	29.2	22.1	91	79	10	10	------	d° a.
30	31.4	23	90	69	9	9	------	
Mean	29.3	22.6	90.4	81.1	8.9	9	------	
Total	------	------	------	------	------	------	238.7	

DAVAO.

[$\phi = 7°\ 01'$ N; $\lambda = 125°\ 35'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.4	23.6	94	87	9	8	------	⊤ p.
2	31.7	22.1	90	72	7	6	------	⊤ p.
3	30.2	22.3	97	70	5	7	------	
4	31.5	21.4	97	68	6	8	------	
5	31.7	22.2	96	71	6	5	------	
6	31.7	22.3	96	69	5	6	------	
7	30.7	22.6	97	71	6	5	------	
8	29	21.8	97	79	6	8	23.6	● p.
9	29.1	22.2	97	79	5	9	21.6	● ⌐◪ p.
10	31.8	22.1	95	69	6	5	------	
11	28.7	21.7	96	81	5	6	14.2	● p.
12	29.9	21.6	98	71	5	8	14.5	● p.
13	30	21.5	96	78	5	8	------	
14	30.7	22.6	96	71	6	5	------	
15	32.7	22	96	64	5	7	11.4	● p.
16	29.9	22.3	97	75	8	8	18.3	● p.
17	30.4	22.2	97	69	6	5	------	⊤ p.
18	30.8	21.9	96	62	6	5	------	
19	28	23.1	96	86	9	10	------	d a.
20	30.4	21.5	96	65	6	6	14.2	● p.
21	30.7	22.3	96	70	5	5	------	
22	31.6	21.9	97	71	6	5	------	⊤ p.
23	32	23	97	66	6	5	------	
24	28.5	22.3	97	85	5	8	------	⊤ p.
25	26	22	96	84	8	9	23.1	● a.
26	27.5	21.1	96	80	9	8	9.1	● a.
27	28.5	22.1	96	82	9	8	------	
28	31.8	21.5	96	71	5	6	------	
29	30.4	22	93	71	5	7	16	●² ⌐◪ p.
30	31.9	21.9	96	69	5	5	------	⊤ p.
Mean	30.2	22.1	96	73.5	6.2	6.7	------	
Total	------	------	------	------	------	------	166	

[1] 28 days of observation.

METEOROLOGICAL DATA, ETC.—Continued.

COTABATO.

[$\phi = 7°\ 13'$ N; $\lambda = 124°\ 15'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	25.8	22.8	93	83	10	10	49.5	●° a. ● p.
2	31.2	22.8	95	71	6	9	.5	☌° a. ⊤ d° p.
3	31.3	23.7	95	74	4	10	3.3	≡° ☌ a. d° ◩ p.
4	32.1	22.6	97	69	6	9	------	≡° ☌ a. ◠° p.
5	33	23.4	95	73	10	10	4.6	☌° a. p d° ◩ p.
6	31.5	23.1	97	66	10	9	2.3	≡° ☌ a. d p.
7	30.8	23.1	97	85	10	4	18.8	≡° ☌° a. p d p.
8	30.4	23.2	97	69	10	6	6.1	☌² a. d ◩° ● p.
9	30.3	22.2	96	70	10	5	9.6	d a. ● p.
10	30.1	24	95	69	10	8	51.3	☌² a. ● p.
11	29.1	23.1	97	78	10	9	8.1	☌² a. ∞ ● p.
12	30.6	23.2	96	72	8	8	.5	≡° ☌ a. d° p.
13	29.8	23.2	95	77	10	10	31.7	≡° ☌° a. ● a. p.
14	30.6	23.5	97	72	10	10	5.6	d° a. p.
15	31.8	24	97	74	6	4	37.6	d ◠° a. ●² p.
16	30.7	22.8	96	87	7	10	1.1	≡° ☌² a. d° p.
17	31.5	23.1	93	71	8	3	.5	☌² a. d° p.
18	31.7	23.3	95	73	2	4	------	≡° ☌² a. ◠² p.
19	29.4	24	96	75	10	10	20.6	☌ a. ●² p.
20	31.2	23.4	95	74	7	5	2.3	☌° a. d p.
21	29.7	24	97	75	10	10	10.9	☌² ◠ d² a. ●° p.
22	32.4	23.1	96	74	8	4	------	●° ≡° ☌ a. d° p.
23	30.6	23.5	96	74	9	7	------	≡° ☌ a.
24	31.5	24.3	94	88	8	10	.8	☌² a. d° ◩ p.
25	30	23	96	85	10	10	.3	☌² a. d° p.
26	28.9	23	94	75	10	10	.3	☌ d° a.
27	29.3	23.1	97	87	10	10	16.2	≡² ☌° a. ●° p.
28	29.1	22.1	96	73	10	10	------	≡ ☌° a.
29	30.3	23.4	95	76	10	10	14.5	☌° a. ● p.
30	29.1	23	95	77	10	10	------	≡° ☌ a.
Mean	30.5	23.2	95.7	75.5	8.6	8.1	------	
Total	------	------	------	------	------	------	297	

DAPITAN.

[$\phi = 8°\ 40'$ N; $\lambda = 123°\ 25'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.2	21.9	84	80	10	10	29	● a. p. ⊤ p.
2	30	22.1	93	76	10	8	------	● a. ◟ ⊤ p.
3	30.3	21.7	90	75	9	7	4.3	◟ p.
4	30.3	21.5	92	70	10	9	34.6	● a. p. ○ ⊤ p.
5	30.5	22.2	87	71	8	6	------	● a. ◟ p.
6	30.7	22.4	91	70	7	5	------	☌ a. ◟ p.
7	30.2	22.1	91	76	8	6	66.8	○ ◩ ● p.
8	30.4	22	91	74	9	5	74.7	● ◩ p.
9	30.3	22.1	90	77	8	6	6.1	● ⊤ a. p. ◟ p.
10	30.4	22.2	90	77	9	7	2.8	◟ ● p.
11	29.9	22	89	72	8	7	------	◠ a. ⊥ p.
12	29.5	22.1	90	74	9	8	7.9	● ◠ a. ○ ◟ p.
13	30	22	90	72	8	6	1.8	● a. ◟ p.
14	29.7	22.4	91	74	7	9	2	
15	29.9	22.2	90	72	10	10	4.1	● a. p. ◟ p.
16	30.4	22.4	88	70	9	8	2	● a. p. ◟ p.
17	30	22.2	90	70	9	7	1.3	⊕ a. ○ ● p.
18	30.2	22.3	90	71	10	8	8.4	● a. p. ○ p.
19	29.8	22.1	90	73	10	9	3.8	● a. p.
20	31.4	22.4	88	70	9	8	------	☌ d ◠ a.
21	30.3	22.3	93	69	7	5	3.3	☌ a. ◟ ● p.
22	30.4	22.3	90	73	7	8	------	◟ ● p.
23	30.2	22	93	69	8	7	------	⊤ p.
24	30.2	22.1	91	70	9	6	3.8	
25	31.5	21.7	86	72	9	5	------	● a.
26	30.3	21.5	90	72	8	6	4.1	● ◟ p.
27	30	21.7	92	71	10	8	6.1	● a. p.
28	28.6	20.8	92	81	10	7	2.8	● a. p.
29	28.4	20.4	90	79	10	7	35.1	● a. p.
30	27.7	20.2	91	78	10	9	39.9	● a. p.
Mean	30	21.9	90.1	73.3	8.8	7.2	------	
Total	------	------	------	------	------	------	344.7	

BUTUAN.

[$\phi = 8°\ 56'$ N; $\lambda = 125°\ 32'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	23.7	93	86	10	9	1	◟° ● a. ⊤ ◟ d ◟
2	30.1	23.6	92	77	6	7	------	⊤ ◟ p.
3	30	23.4	97	80	6	7	6.1	☌ a. ◠ p.
4	28.7	22.4	97	82	9	9	.8	● d a. ⊤ p.
5	27.6	23.1	97	82	10	9	.8	● a. d a. p.
6	29.2	23.2	97	76	8	9	1.5	
7	28.5	23.1	97	89	8	10	22.1	● a. p. d p.
8	29.1	23.4	96	85	9	8	.8	d a. p. ⊤ ☋ p.
9	28.8	23.6	98	79	7	8	.3	☌ a. ⊤ ◟ d ◡ p.
10	28.6	22.7	96	81	9	10	42.2	d ●² p.
11	27.5	22.6	92	84	10	7	5.1	● a. p. ○ p.
12	29	22.8	97	67	7	8	.3	☌² d a.
13	30	23.3	95	70	9	9	6.9	☌ a. ⊕ p.
14	29.6	23	95	77	8	7	4.1	☌ a. ● p.
15	29.3	23.1	97	76	7	6	2	≡ a. ●° p.
16	25.1	23.2	98	92	9	10	26.9	● a. ●° p.
17	29.1	22.1	97	76	2	3	.5	☌² a. ⊤ d p.
18	29	22.8	96	65	6	7	13.2	☌ a. ⊤ ◡² p.
19	25.5	23.6	96	93	9	10	7.4	● a. d p.
20	28.1	22.6	97	81	8	7	------	⊕² a. ◟ p.
21	29.4	22.1	97	74	6	9	------	
22	30.6	23.3	95	68	8	4	30.5	☌ a. ● ◩ p.
23	28.2	23.2	95	82	9	10	3.6	● a. p. ◠ ◟ p.
24	27.7	22.4	99	92	7	10	6.9	d a. p. ● p.
25	25.6	22.7	97	91	10	10	21.6	● a. p. d p.
26	25.1	22.3	97	92	10	10	1.5	d° p.
27	24.5	22.4	98	94	10	10	18.8	d a. ● a. p.
28	24	22.1	99	95	10	10	13.3	● a. d a. p.
29	27.3	22.8	99	86	10	9	13.2	● ◩ d a.
30	28.3	23.4	98	77	10	8	.8	● ◠² a. ●° p.
Mean	28.1	22.9	96.5	81.6	8.2	8.3	------	
Total	------	------	------	------	------	------	252.2	

DUMAGUETE.

[$\phi = 9°\ 18'$ N; $\lambda = 123°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27.7	23.8	84	94	10	10	64	●° ⊤ a ◟ ●² p.
2	29.4	22.8	95	75	10	6	1.5	● a. ◟ p.
3	31	24	91	78	10	10	------	☌ a. ◟ p.
4	31.3	24.3	90	67	10	10	.8	☌ a. ◟ ◠ p.
5	30.3	24.5	92	77	10	10	------	●° a.
6	30	25	87	75	10	10	2.5	☌ ● a. ◟ p.
7	30.3	24.8	82	75	10	10	4.1	d p.
8	30.4	24.5	91	74	10	10	64.3	p ◟ d a. ◩ p.
9	29.4	21.8	95	84	10	10	3.6	●² a. ●° p.
10	31.5	23.5	90	68	10	10	4.1	● ◩ p.
11	29.5	22.1	91	68	10	10	------	☌ a.
12	30	23	80	71	10	7	------	☌ a ◟ p.
13	31	22.8	87	71	10	10	3.3	☌ a. ●° ◡³ p.
14	29.3	23.6	89	77	10	10	3	◠² ●° a. ○² ◡ p.
15	30.8	22.8	93	79	10	10	------	●° a.
16	31.3	22.8	86	93	10	10	6.7	☌ a. ● ⊤ ◡ p.
17	29.9	22.3	86	70	7	6	------	☌ a.
18	30.5	23.3	91	70	10	10	------	d a. ◟ p.
19	30.2	23.2	84	92	10	10	8.9	◩ ☌ a. ⊤ d p.
20	30	------	90	76	10	10	------	☌ ◠ a.
21	30.9	------	85	73	10	10	------	◟ d° p.
22	32.2	------	76	66	10	7	7.1	●° ◩ p.
23	29.2	------	95	79	10	10	4.1	☌ d a.
24	30.9	------	92	76	4	10	18.5	p a. ◩ p.
25	28.7	------	91	88	10	10	10.9	d a. p. p p.
26	29.4	------	82	71	10	10	10.9	☌ a. ◟ p.
27	28	------	94	81	10	10	7.9	● a. d p.
28	26.5	------	90	81	10	10	28.7	● a. p.
29	27.8	------	91	79	10	10	1.3	p d a. ◟ p.
30	29.5	------	87	78	10	10	------	
Mean	29.9	23.4	88.6	76.9	9.7	9.5	------	
Total	------	------	------	------	------	------	256.2	

METEOROLOGICAL DATA, ETC.—Continued.

YAP (WESTERN CAROLINES).

[$\phi = 9° 29'$ N; $\lambda = 138° 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	24.9	95	70	8	6	------	☌° a.
2	32	25.4	93	73	8	8	------	☊° a.
3	31.2	24.6	92	84	7	7	------	☊° a. ☌° a. p.
4	31.7	25.8	88	79	4	9	10.4	☌° a. p. ● p.
5	31.4	25	83	74	7	5	------	☌° a.
6	31.6	25.1	95	76	6	5	2	☌ a. p. p² p.
7	31.6	24.8	96	85	8	8	42.4	● a. p. ☌ ☐◹ p.
8	31.9	23.6	97	98	8	9	24.1	● ☌° p.
9	31.2	23.6	93	74	9	8	8.1	● ☌ a. p. ↘° p.
10	30.9	24.9	85	75	7	6	2	☌ a.
11	28.8	24.2	88	97	9	10	14.2	┬ a. ● ◟°a. p. ∈
12	30.9	24.8	88	78	10	9	9.7	∪° p.
13	31	24.6	97	72	9	6	------	● a. ☋° p.
14	30.9	24.6	88	88	2	6	3.6	☊° a. ☌ ∪° p.
15	30.8	22.8	98	76	10	6	6.1	☐◹° a. ☌ a. p. ∪°
16	30.8	25.6	83	75	3	4	4.1	☌ a. p.
17	31	25.1	97	83	7	7	2	☌°a. p. ☋²●°◟°
18	30.9	24.3	97	82	7	7	16.3	☌ ☋ ☐◹ a. ● p.
19	29.2	23.8	97	92	9	9	3.3	◠²a. ☌°a. p. ◟°p.
20	30.8	24.6	89	80	10	8	23.4	∪ ●° a.
21	29.6	25	92	79	9	9	5.8	● a. p.
22	27.8	24.4	95	90	8	9	25.6	● a. p. ┬° ◟° p.
23	30	24.4	98	83	10	8	17.3	☌ ○° a. p. ◠ p.
24	29	24.6	98	82	10	10	1.8	◟° ● ┬° a. ☌° p.
25	29.3	25.5	85	83	9	9	.3	●° p.
26	29.8	24.9	84	80	9	9	------	☌ a. p.
27	30.2	25.4	84	77	7	7	------	
28	31.2	25	91	70	8	6	26.7	◠° a. ◟² ☌ p.
29	28.2	24.3	99	90	10	10	2.3	☐◹ ● a.
30	28.6	24.2	93	92	9	10	5.8	☊ a. ☌ a. p. ◟² p.
Mean	30.5	24.7	91.9	81.2	7.9	7.7	------	
Total	------	------	------	------	------	------	257.3	

MAASIN.

[$\phi = 10° 08'$ N; $\lambda = 124° 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	23.8	95	90	10	10	109.7	◟°° ● a. p.
2	29	23.5	93	83	10	10	------	☌ ◟° p.
3	30.5	23.6	92	67	10	9	------	
4	31.8	23.2	91	76	8	8	6.9	p ◟ p.
5	31	23	96	81	10	10	18.8	
6	30	23	95	82	10	10	------	● ☌ a. ☌ ∪ ◟ p.
7	31	22.8	94	83	10	10	------	☌ a.
8	30.9	22.8	95	74	10	10	------	
9	31	22.8	93	79	10	10	20.8	● p.
10	31	22.8	93	85	10	10	29.5	● a. ☌ ☋² ∪ p.
11	31	22.8	94	84	10	10	------	∈ ☋ ◟ p.
12	30.1	22.9	93	70	10	10	------	☌ ◠ a. ☋ ∪ p.
13	31	23	93	83	10	10	------	◟² ☋ ∪ p.
14	30	------	93	73	10	10	17	● ◟ ☌ a.
15	31	24	89	78	10	10	------	☌ p.
16	30.9	23.8	88	93	10	10	37.1	● ☌ p.
17	30.9	21.8	90	79	10	6	------	☋ ◟ p.
18	28.5	21.4	92	77	10	10	9.1	∈ ◟ ☌ p.
19	29.6	22.1	97	90	10	10	61.7	┬² a. ● ☌ a. p.
20	29.6	22.1	96	73	10	10	17.8	☌ a. p. ◟ ∪ p.
21	30.5	23.6	95	83	10	10	45.2	p ☌° a. ☐◹² ● p.
22	29.5	23.6	89	85	10	8	------	☌ a.
23	29.5	24.4	93	82	10	10	------	
24	29.6	23.7	95	87	10	10	9.9	☌ ┬ a. p. ◟ p p.
25	29.5	22.6	95	79	10	10	35	☌ p a. p. ◟ p.
26	29.6	22.5	96	79	10	10	39.9	☌ p a.
27	29.5	22.4	90	90	10	10	79.5	●² ☌ a. p.
28	29.4	22.4	93	95	10	10	143.5	● a. p. ☌² p.
29	29	21.8	95	76	10	10	47.2	● ┬ a.
30	29.5	21.6	92	86	10	10	------	
Mean	30.1	22.9	93.2	81.4	9.9	9.7	------	
Total	------	------	------	------	------	------	728.6	

SAN JOSE BUENAVISTA.[1]

[$\phi = 10° 44'$ N; $\lambda = 121° 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	26.7	23.4	92	94	10	10	118.4?	●² a. p. ◟²² p.
2	------	------	------	------	10	10	41.4	● a. p. ☌ p.
3	32.3	22.5	95	83	2	10	------	p ☌ p.
4	32.6	22.1	95	69	4	10	------	p p.
5	32.1	22.6	94	63	10	10	------	☌° ◟ p.
6	28.8	22.5	86	78	10	10	1	●° a. ☌° ◟ p.
7	32.6	22.5	90	71	10	10	------	☊° a. ◟ p.
8	31.9	22.4	87	68	8	7	------	☌° ┴ ☐◹ ∪² p.
9	26.5	23.6	86	89	10	10	2.5	● ┬° a ◟° p.
10	32.2	22.6	68	72	8	8	27.2	☊° a. ● ☐◹ p.
11	32	21.5	91	65	8	7	------	
12	32.1	22.1	80	60	3	6	1	☊° a.
13	27.2	23.5	88	91	10	10	20.3	☌° ● a. p.
14	31.3	21.9	92	76	10	6	------	☌° a.
15	32.9	22.7	87	70	2	4	5.9	● ┬ p.
16	32.5	22.5	96	80	4	10	------	☌° p.
17	32.4	23.2	84	75	5	7	------	
18	31.8	22.3	88	65	3	5	4.3	● ◟ p.
19	30.6	22.4	90	81	4	10	3	┬ a. ☐◹° ● p.
20	31.6	22.3	90	75	2	6	1	● p.
21	30.8	22.2	91	85	8	10	8.4	☌ ● ◟ p.
22	28.8	22.5	90	92	10	10	8.1	● a. ☌ p.
23	------	21.9	82	74	9	10	.8	☌° a. p. ◟ p.
24	31.3	22.5	84	80	5	9	4.3	☌° a. ┬ a. p. ● p.
25	31.5	22.6	95	82	8	10	------	☌ a. p.
26	30.9	20.3	96	79	4	7	4.3	● ☌° p.
27	31.9	21.7	92	73	9	10	8.1	☌ a. ● ◠° p.
28	30.6	22.3	96	86	10	10	9.4	●° a. ☌° p.
29	27.2	22.2	89	83	10	10	.8	☌° a.
30	30.8	21.9	90	75	6	6	------	
Mean	30.9	22.4	89.1	77	7.1	8.6	------	
Total	------	------	------	------	------	------	270.2?	

CUYO.

[$\phi = 10° 51'$ N; $\lambda = 121° 01'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	27.4	87	91	10	10	269.2	● a. ◟² ●² ◟ p.
2	25.7	25.1	98	92	10	10	16.8	● a. ☌ a. p.
3	31.7	23.4	97	75	8	8	------	
4	31.1	25.1	95	74	9	7	------	☐◹ a. ◟ p.
5	30.4	26.4	87	84	8	9	------	
6	30.1	26.6	87	85	9	8	------	
7	31	26.6	89	79	9	9	------	
8	31.3	26.7	89	85	9	8	------	☐◹ a. ⊕ p.
9	27	26.2	90	91	10	10	98	☐◹ a. p. ●² p.
10	30.9	24.2	96	77	9	8	1.5	●° ☐◹° ◟ p.
11	29.6?	25.2	89	84	9	9	------	
12	31.3	22.8	97	79	7	7	24.1	◟ ●² p.
13	26.8	24.1	90	89	10	10	7.7	● a. p. ☌ p.
14	30.7	24.1	92	76	9	8	4.6	●° p.
15	31.7	24.3	97	75	7	7	.8	●° a. ☐◹ p.
16	30.9	24.1	97	80	9	8	.5	☌ p.
17	31.7	24.7	95	84	9	7	------	●° a. ☌ a. p.
18	31.7	23	97	94	9	9	------	☌² p.
19	30.1	26.1	88	89	9	8	------	◟ p.
20	30	24	91	86	8	9	------	⊕ p.
21	30.4	26.6	90	90	8	8	4.8	☌² ◟ ● p.
22	30.7	25.1	95	79	9	9	------	☌² p.
23	29.2	24.4	94	80	10	9	.8	●° a. ☌ a. p.
24	30	23.6	97	87	9	7	------	☊ a. ◟ p.
25	30.3	24.1	90	89	9	9	1	☊° a. ☌² ●° p.
26	30.1	26.5	88	87	9	8	------	
27	29.8	26.4	88	92	8	8	15.5	☌ a. ⊕ p.
28	28.4	23.2	97	85	9	10	2.5	● ☌ a. p.
29	28.5	23.7	85	87	10	10	4.6	● a. ☌ p.
30	29.7	23.7	90	86	10	8	------	●° ☌ a.
Mean	30	24.9	92.1	84.4	8.9	8.5	------	
Total	------	------	------	------	------	------	452.4	

[1] The rain gauge of this station was blown down by hurricane winds on November 1.

METEOROLOGICAL DATA, ETC.—Continued.

BORONGAN.

[$\phi = 11°\ 37'$ N; $\lambda = 125°\ 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.6	22.5	90	83	10	10	105.4	↙°●²a.↙²●²⌐◪²
2	28	22.1	95	92	9	9	13.8	● ◟ p.
3	30.5	24.2	92	75	6	5	-----	⌒² d p.
4	30	22	96	74	5	4	23.1	☊² ⌒ ◯ a. ●° p.
5	30.3	23.8	96	71	8	5	23.1	● a. p. ⌐◪ p.
6	29.2	23.7	96	84	10	10	25.9	● a. p. ◟ p.
7	30.5	22.6	98	74	6	6	14	● a. p. ◟ p.
8	30	24	95	78	6	5	9.7	● a. p. ⌒² p.
9	30	23.4	96	74	9	6	1.1	● a. p.
10	28.8	23.2	96	89	7	10	7.8	☊° a. ● ⌣ ◟ p.
11	25.8	22.7	95	90	10	10	3.6	☊ a. ● a. p. ⌢ p.
12	32	21.7	95	66	10	8	8.4	☊° a. ⌣ ◟ ● p.
13	30.2	23.6	91	73	10	9	6.1	● a. p.
14	30.3	23.4	96	82	10	6	7.1	☊ ● a. ⌣² ◟ p.
15	31	23.8	96	71	8	6	5.3	● a. p. d ⌣° ◟ p.
16	28.5	23.6	95	85	10	10	35.8	● a. p. ⌐◪ p.
17	30.2	22.	93	70	7	4	3.6	☊ a. ⟒ p.
18	30.5	22.8	97	68	7	4	10.4	● a. p ◟ ⊤ p.
19	29.7	22	96	79	8	10	13.7	● a. p. ◟ p.
20	30.7	22.8	97	69	9	6	11	☊ ⌒ ●° a. ◟ ● p.
21	31	23	97	91	3	8	7.4	☊° a. ⊤ ●° ◟ p.
22	31.5	23	97	72	4	6	8.6	☊ ≡ d a. ◟ p.
23	30.4	23.7	97	69	7	3	1.8	● ≡ a. ◟ p.
24	30.1	23.4	97	78	8	9	14.2	☊ ≡ ● a.
25	29.5	23	96	65	10	8	3.3	● ≡° a.
26	30.5	23.5	93	69	8	6	14.5	●° a. ● p.
27	30.2	23.1	94	83	9	10	14.8	● a. p.
28	29	24	-----	70	7	7	-----	● a. ◟ p.
29	29.9	24	-----	80	4	8	12.4	● a. p. ◟ p.
30	30.5	22.6	94	70	7	6	15.5	☊ ⌒ a. ● a. p.
Mean	29.9	23.1	95.2	76.5	7.7	7.1	------	
Total	------	------	------	------	------	------	421.4	

MASBATE.

[$\phi = 12°\ 22'$ N; $\lambda = 123°\ 36'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27	21.6	98	98	10	10	73.2	
2	29.5	24.2	97	88	10	9	.3	
3	31.4	25.8	98	79	8	8	-----	
4	31.5	23.6	100	-----	8	6	-----	
5	31	23.8	93	86	5	9	1.3	
6	28.4	24	96	89	8	10	-----	
7	30.8	24.4	98	-----	9	8	-----	
8	31.6	25.2	98	-----	9	9	-----	
9	31	24.5	98	-----	9	8	-----	
10	30.2	24.5	98	-----	8	9	3	
11	29.6	24	98	-----	10	8	-----	
12	30	24.2	98	83	9	9	3	
13	27.6	24.8	98	93	10	9	39.4	
14	31.2	23.4	98	77	10	9	4.3	
15	31.2	24.5	98	85	9	9	-----	
16	28.6	25.2	97	85	10	9	10.7	
17	29.8	24	100	92	9	9	.5	
18	31.4	24.4	98	73	9	7	.8	
19	-----	24.6	98	97	9	10	17.5	
20	28.8	24.2	98	92	10	8	6	
21	29	25.4	98	99	9	10	6.1	
22	29.5	25.2	98	88	10	9	.5	
23	30.4	25.4	99	-----	9	9	.8	
24	31.4	24.4	97	94	7	10	.8	
25	30.2	25.2	99	86	10	10	.8	
26	29.5	24.4	100	92	10	10	6.9	
27	29.8	23.5	98	81	10	9	8.4	
28	29.4	23.8	98	92	10	10	-----	
29	28.6	24.8	95	88	9	10	-----	
30	29	24	98	86	10	9	2.5	
Mean	29.9	24.4	97.8	88	9.1	9	------	
Total	------	------	------	------	------	------	186.8	

ROMBLON.

[$\phi = 12°\ 35'$ N; $\lambda = 122°\ 16'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27.6	-----	-----	89	-----	10	67.3	● a. p.
2	28.9	24.1	86	84	10	10	2	● a.
3	30.5	25.4	89	77	6	4	-----	
4	30.6	25.1	89	62	6	3	.5	⊤ ● p.
5	30.5	23.6	96	63	4	4	5.1	⌐◪° ● p.
6	29.9	24.1	92	75	2	8	4.3	∞ ● p.
7	30.5	24.2	96	69	7	1	.3	● a.
8	29.5	25	89	71	5	9	-----	
9	30.3	24.3	95	76	4	8	-----	◟ p.
10	30.5	23.1	97	66	3	1	-----	∞ ⟒ p.
11	29.7	22.8	97	71	9	8	9.7	● a.
12	29.5	22.6	97	91	4	10	40.1	● a. p. d p.
13	25.4	23.4	92	91	10	10	52.1	↙°a. ● p.
14	28.6	23.1	87	86	8	10	22.8	● a. p. ⌒ p.
15	29.7	21.6	98	82	1	7	-----	
16	29.6	21.6	87	73	4	10	8.1	
17	27.6	21.8	97	78	10	10	8.4	● a. p. d p.
18	30.3	22.3	94	72	0	2	-----	
19	29.2	24.1	94	76	10	10	14.7	d ● p.
20	29	23.1	97	81	6	6	.8	
21	28.4	24.9	87	86	10	10	11.9	● a. p.
22	26.8	22.1	91	85	10	10	20.1	● a.
23	29.5	22.4	98	82	10	4	.3	● a. p. ◟ p.
24	29.6	23.1	96	76	4	4	-----	
25	28.5	23.8?	93	90	6	10	.5	● p.
26	29.6	23.9	94	72	10	10	1.8	
27	29.6	24	88	72	10	4	2	● a. p.
28	29	24.1	92	88	10	10	15.7	d ● p.
29	27.8	22.6	97	81	8	10	19.8	● d a.
30	27.5	24.3	82	89	10	10	33	d a. ● p.
Mean	29.1	23.5	92.7	78.5	6.8	7.4	------	
Total	------	------	------	------	------	------	341.3	

SUMAY, GUAM (LADRONES ISLANDS).

[$\phi = 13°\ 24'$ N; $\lambda = 144°\ 38'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30	23	85	71	6	10	-----	
2	29.6	23.6	84	78	10	10	57.1	
3	30	24.2	86	71	8	5	25.4	
4	30.2	24	90	71	8	5	-----	
5	30	25	84	68	4	3	-----	
6	30	24	84	71	3	5	2	
7	30.2	24	84	70	3	5	6.4	
8	29.8	24.8	84	71	10	7	-----	
9	29	25.2	87	73	10	10	5.9	
10	30	24	89	72	10	8	.8	
11	30.4	24	84	68	2	3	2.5	
12	31	25.6	86	65	8	3	-----	
13	30	26.2	84	69	8	5	10.2	
14	28.2	23.4	89	81	10	10	7.7	
15	30	25.2	89	70	6	8	14	
16	29.4	24.6	93	76	10	10	11.4	
17	29	24.8	92	73	6	8	3	
18	27	25.4	89	84	10	10	6.4	
19	29.8	26.4	84	84	8	10	4.3	
20	30	25	87	71	10	5	-----	
21	29.4	25	84	71	10	4	2	
22	29.6	25.6	84	80	6	10	3	
23	29.6	25	89	71	10	6	-----	
24	29.4	24.8	84	68	2	4	.8	
25	29	24.6	84	73	3	5	1.3	
26	28	25.2	84	74	8	9	1.3	
27	29	25	84	71	3	3	1.3	
28	28.8	25	89	82	3	9	2.5	
29	28.4	25.2	89	79	6	10	3	
30	28.4	26	89	77	10	10	-----	
Mean	29.4	24.8	86.5	73.4	7	7	-----	
Total	------	------	------	------	------	------	172.3	

METEOROLOGICAL DATA, ETC.—Continued.

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28	23	97	85	10	10	16	d a. ●° p.
2	28.6	------	------	92	10	10	60.2	●² p.
3	31	23.1	97	70	10	5	1	⌒° a. ● p.
4	------	23	98	68	10	9	8.4	● a.
5	30.1	22.6	93	75	10	9	14.2	● a. p p.
6	30.4?	23.6?	97	71	10	7	5.8	
7	30.7	24	97	75	10	9	5.6	● a. p. ⊍ p.
8	30.3	23.6	97	71	10	10	------	⊍ p.
9	30.2	23.1	97	76	10	10	.3	⊍ ↙ p.
10	30.5	23.2	98	82	9	5	------	⊤ p.
11	31.6	22.2	95	62	10	10	8.6	●° p.
12	27.2	23.1	96	96	10	10	5.8	d a. p p.
13	26	23	92	96	10	10	65.1	d ● a. p.
14	27	------	99	87	10	10	17.6	● a. p. ⌒² ⊍ p.
15	30.6	21.5	98	79	8	8	16.8	⊤ ● p.
16	30.2	23.5	98	68	10	10	17.5	d ⌒² a. ● p.
17	27.6	22.5	94	84	10	10	88.9	●² a. ● p.
18	30.6	22.8	98	72	10	6	9.1	● ⊍ p.
19	27.9	23.5	97	83	10	10	12	p a. ● p.
20	29.7	23.7	96	88	10	10	9.2	d° p a. p.
21	28	24	84	89	10	10	6.9	p a. d a. p.
22	26	21.1	------	94	10	10	64.8	●² a. ● p.
23	30	21.4	97	81	10	8	13.2	p a. p. ↘ p.
24	30.5	23.5	97	75	10	7	5.4	● ⌒² a. p p.
25	30.2	23.4	98	74	8	10	------	
26	29.7	23.6	96	75	10	10	16.5	● a. p.
27	30.7	23.8	92	68	10	10	1	p a. p.
28	28.6	23.5	97	82	10	10	10.7	d a. ● p.
29	28.5	23	96	88	10	10	7.1	d a. ● a. p.
30	30.1	22.6	97	71	10	10	3.3	p p.
Mean	29.3	23	96	79.2	9.8	9.1	------	
Total	------	------	------	------	------	------	491	

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	------	------	88	------	10	10	68.3	↙° ● a. p.
2	------	------	------	80	10	9	2.8	d ↘ ●° p.
3	31.2	23	96	66	4	6	.3	⌒ a. d p.
4	32.2	22.5	96	65	6	7	------	
5	32.4	22.3	89	77	4	8	7.9	● a. ●° p.
6	32.8	22.5	96	69	8	8	1.3	⊕ ○ a. ⌒ ●° p.
7	31.5	23	96	73	7	7	------	⌒ a. p.
8	31.7	23	96	76	8	8	22.4	● a. ●° p.
9	31.4	22	96	69	7	7	.5	♌ ⊕ ○ a. d p.
10	31.5	22.4	97	76	6	9	------	♌ a.
11	30.8	22	96	86	8	9	4.1	♌ a. ● p.
12	32.6	22	97	80	8	10	34.8	d ●² p.
13	26.8	23.5	97	96	10	10	27.4	d ● a. ●° p.
14	29.3	23.5	89	89	10	9	8.9	d ●° ⌒° ⊍ p.
15	31.2	24.5	96	81	9	7	5.1	● d a. ⌒ a. p.
16	29.3	22.5	91	78	7	8	19.6	●° a. ◪° ● p.
17	30.5	24.4	88	78	10	7	4.2	● d a. ⌒° ⊍ p.
18	31.1	25	92	71	7	6	2.5	● a. d a. p. ↘ p.
19	29	23	97	84	8	9	15.8	●° a. ⌒ ● p.
20	32	23.5	91	70	7	7	14.8	● a. ●° p.
21	31.5	24	98	89	9	10	36.3	● a. p.
22	28.9	23.7	88	85	9	10	25.9	↙° a. ◪ p.
23	31.8	24.5	90	78	9	6	4.7	● a. ●° ↘ p.
24	31.4	25	90	78	6	8	2.7	● ⌒ a. d p.
25	31	23.4	84	71	9	10	3.6	● d p.
26	31	23.3	83	86	8	9	28.1	↙° a. ● a. p.
27	30.4	23.5	80	70	8	9	3.6	●° a. p p.
28	31	23.5	81	80	10	10	16.5	d ⌒° a. ● a. p.
29	31.4	23	81	75	9	7	17.9	⌒ ● a.
30	29.9	23.5	97	69	10	10	7.6	⊤ a. ● a. p.
Mean	30.9	23.3	91.6	77.4	8	8.3	------	
Total	------	------	------	------	------	------	387.6	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	26.6	23.1	87	87	10	10	12.5	●° a. p.
2	32.2	23.3	94	67	10	9	.3	●° p.
3	33.1	21.9	97	84	7	8	13.2	● p.
4	31.9	22.2	98	75	6	8	------	●° a.
5	32	20.8	97	62	7	8	.5	●° p.
6	32.4	21.2	98	68	9	9	------	
7	32.4	21.5	98	75	8	8	4.6	●° a.
8	30.7	22	98	79	8	9	14.9	● p.
9	32	21.1	98	68	10	7	------	≡° a.
10	30.7	19.9	98	72	6	9	------	d p.
11	31	20.2	98	69	9	9	------	
12	31	20.7	98	88	7	10	146.3	⊤° ● p.
13	25	22.3	98	98	10	10	94.3	⊤° a. ● a. p.
14	29.4	21.8	93	75	10	8	.3	d° a. ●° p.
15	31.6	23	98	72	9	8	1.3	●° a.
16	26.5	21.7	98	79	7	9	.3	≡° a. ●° p.
17	30	21.6	95	80	9	9	11.1	● ⊍ p.
18	32	21.2	98	84	6	8	5.8	d ●° p.
19	26.2	22.8	97	95	9	10	13.6	● p.
20	30.1	21.2	98	90	8	10	16.7	●° p.
21	27.6	23.4	97	94	10	10	157.8	d a. ● p.
22	26.9	22.1	98	81	10	10	13.3	●² a. ●° p.
23	32.6	22.4	98	74	10	8	------	d a.
24	30.5	23.1	99	87	9	10	1.5	●° p.
25	30	21	97	72	8	10	------	
26	31.6	20.5	98	72	9	9	10.7	≡° a. ● p.
27	32	20.5	98	72	7	9	------	≡° a.
28	30	21.9	93	85	10	10	7.1	●° p.
29	28.4	21.6	96	73	10	8	2.5	●° a.
30	29	19.5	99	79	8	9	------	
Mean	30.2	21.6	96.9	78.5	8.5	9	------	
Total	------	------	------	------	------	------	528.6	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.4	23.5	97	89	10	10	6.5	● p.
2	26.4	23	92	93	10	10	56.6	↙° a. ● a. p.
3	33	23.1	92	70	9	6	------	⌒ a.
4	32.7	22.8	97	55	7	4	------	
5	30.4	21.5	96	71	5	6	11.9	● p.
6	31.9	21.9	95	61	5	6	------	
7	33	22	95	61	5	7	------	
8	32.8	22.5	93	60	6	6	------	
9	32	22.5	97	65	5	6	------	
10	32.3	22.6	92	64	4	7	.5	◪ ● p.
11	31.4	21.6	96	68	5	7	3.6	
12	26.8	23.5	97	90	10	10	5.9	● d a. p.
13	26.1	22	87	88	10	10	57.1	● a. ●² p.
14	27.8	21.6	97	92	10	10	5.7	● a. d p.
15	32.7	22.5	97	62	5	7	------	
16	31.4	22.6	88	71	4	7	5.1	○ ● p.
17	26.1	22.5	97	93	10	10	76.4	●² a. ● p.
18	30.8	22.4	97	79	10	6	6.6	●° a. p.
19	29	22.3	95	75	8	7	------	
20	30	22.5	92	82	6	10	8.9	d a. p. ●° p.
21	29.8	23.3	97	74	10	9	.5	d a.
22	25	20.6	91	96	10	10	97.1	d a. ● p.
23	30	20.7	97	71	7	6	------	⊤ p.
24	32.2	22.5	97	65	10	4	12.2	d ● a. ●° p.
25	31.3	22.7	97	63	4	9	------	
26	30.6	22	96	66	7	7	.5	d a.
27	30.8	21.8	85	64	6	5	1.1	● a.
28	29.8	22.4	88	83	6	9	2.5	d a. ● p.
29	29.7	22.3	97	92	7	10	.8	● p.
30	29.8	22	97	85	5	7	.5	d a.
Mean	30.2	22.3	94.4	74.9	7.2	7.6	------	
Total	------	------	------	------	------	------	360	

METEOROLOGICAL DATA, ETC.—Continued.

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	21.8	97	68	7	9	9.2	d a. p. ● p.
2	27.5	20.3	98	70	10	9	2	p p.
3	28.8	21	97	71	10	8	12	p a. ● p.
4	27.6	20.1	98	71	10	7	------	● a.
5	29.2	19.3	98	68	5	8	------	
6	30.5	20.8	97	64	2	2	------	
7	30.8	21	98	64	7	7	------	
8	30.9	20.2	98	65	5	8	------	♌ ≡ a.
9	30.2	20	98	66	2	5	------	♌ ≡ a. p° p.
10	31	20.1	98	64	7	6	------	
11	31.1	20	97	64	4	8	------	⊤° p° p.
12	30	19.9	98	65	2	7	------	
13	30.6	19.1	97	71	7	9	16.5	♌ ≡ a. p° ● p.
14	26.6	18.2	98	80	10	10	35.8	● a. p.
15	28.4	20	98	69	2	4	------	
16	30	21.3	98	68	2	8	24.9	● a. p.
17	27.2	20.6	98	71	10	8	27.7	● a. p.
18	25.8	21.8	98	78	7	9	17.8	● p.
19	27.2	21	97	70	10	9	------	♌ d a.
20	28	20.7	97	69	6	9	29	p° a. ● p.
21	27.7	20.6	98	69	9	8	9.9	♌ ≡ a.
22	27	18.8	98	84	10	10	62.2	● a. p.
23	25.9	19.3	98	77	10	8	------	♌ ≡ a. d p.
24	27.5	20.5	98	68	2	5	------	
25	28	20.8	98	68	2	3	2.3	● p.
26	28.1	18.9	98	69	7	8	------	d p.
27	27.8	20	98	71	10	7	9.4	d ● a. p p.
28	27.5	20.1	98	72	10	8	7.6	● p.
29	27.6	18.8	97	77	10	10	48.3	● a. p.
30	26.4	20.3	98	76	2	7	------	
Mean	28.5	20.2	97.7	70.2	6.6	7.5	------	
Total	------	------	------	------	------	------	314.6	

STA. CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.3	22	88	85	9	10	12.7	↙° ● a. p. ↙ ⊤ p.
2	29.3	23.6	78	81	9	9	11.4	↙° ● p.
3	------	22.9	92	68	8	8	3	●° d a. ○ ↙ p.
4	31.5	23.4	92	69	9	8	14	● a. p. ↙ d p.
5	31.4	22	98	64	6	8	1.3	♌ a. d a. p. ↙ p.
6	31.1	23	93	65	7	7	.3	●° a. d p.
7	31	22.1	98	66	2	5	4.3	♌ d a. ● ◠ p.
8	31.8	22.3	98	67	9	6	------	●° ○ a. p. ⊤ p.
9	31.7	23.4	94	68	8	4	------	♌ ∞ a.
10	32.5	23.1	93	65	8	6	------	♌ a. ♉ ↙ p.
11	32.4	21.4	97	72	9	8	1.3	♌ a. ⊤ ↙ ♉ ⌣ p.
12	32	23.2	97	90	10	10	18.5	● a. ⊤ d ↙ p.
13	26.5	23.3	80	79	10	10	67.1	d ↙° a. ● ◠ ↙°° p.
14	------	22.7	98	76	10	9	1.6	↙° a. d a. p. ●² p.
15	------	23.7	90	65	2	3	------	♌ a. ● ↙° ♉ ↙ p.
16	32.6	22.3	98	71	8	9	25.1	♌² ≡ a. d a. p.
17	30.9	22.7	98	86	10	9	34.3	● a. p.
18	------	23.4	99	72	9	6	3.1	≡² a. ● d p.
19	30.6	23.1	97	79	10	9	1	● d a.
20	28.1	22.2	98	90	9	9	12.9	● d a. p. ↙ p.
21	28.7	23.3	84	75	9	10	6.7	● d a. p. ◠ p.
22	28	19.9	96	98	10	10	101.9	↙° ●² a. p.
23	------	20.3	96	82	9	9	1.1	●° d p.
24	31.1	22.7	98	68	3	5	14.5	♌² a d ● ↙ p.
25	32.1	21.8	99	66	7	9	1.5	↙° d a. ● ○ ↙ p.
26	30.6	21.5	98	80	9	8	2.8	∞ d a. ●° a. p.
27	29.5	22.1	97	66	9	7	3.5	● ◠ a. p. d p.
28	30	22.1	97	75	9	8	26.5	● a. p. d p.
29	28.7	22.6	95	92	10	9	9.9	● a. p. d p.
30	28.3	20.4	99	68	8	8	------	♌² ≡ a. d p.
Mean	30.4	22.4	94.5	74.9	8.2	7.9	------	
Total	------	------	------	------	------	------	380.3	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	22	95	73	9	10	6.3	◠ a. ● a. p.
2	29.4	22.7	67	74	9	10	27.4	↙° a. ● p.
3	32	21.4	97	62	8	8	------	⊤ ↙ p.
4	30.2	22.4	97	71	10	8	8.1	●° d² a.
5	31.3	20.4	96	59	9	6	.5	◠ d° a. ↙ p.
6	31.3	20.3	94	68	9	9	.3	d° ♉ p.
7	32.3	20.7	94	60	2	4	------	♌² a. ⊕ p.
8	31.9	21.5	96	62	9	6	------	♌² a. ∞ p.
9	31.7	21.6	96	72	8	7	9.9	d° ● ♉ ◠ p.
10	30.7	21.9	97	69	6	7	6.1	p a. ⊤ ●° ◠ p.
11	31.3	21.3	96	85	9	8	9.4	≡° a. ● p.
12	26.7	21.5	96	83	10	10	3.4	●° a. d p.
13	27.1	21.1	78	71	10	10	21.3	d° ● p.
14	30.1	20.4	97	74	10	9	.7	●° a. p.
15	32	22.4	84	61	2	3	------	⊕ ♉ p.
16	31.4	21.4	94	57	4	9	13.5	● p.
17	25.9	20.6	96	94	10	10	24.4	● a. d a. p.
18	30.3	21.9	97	58	10	8	5.5	●° a. p. d² p.
19	27.6	21.8	97	84	10	10	8.6	●° a. ↙ p.
20	29.8	21.3	94	80	7	10	2.8	d° a. p. ●° ◠ p.
21	28.7	22	96	68	10	9	------	d° a.
22	28.8	18.8	83	96	10	10	50.5	d° a ● a. p.
23	31.2	20.4	90	67	10	6	.3	d° ↙ p.
24	32.5	22.6	93	64	7	6	------	⊤ p.
25	31.8	21.2	96	52	4	8	------	♌° a. ⊕ p.
26	30.4	20.6	80	65	9	6	2.3	♌° a. d° a. p.
27	30.6	20.3	95	56	9	6	.3	d° a. ⊕ ◠ p.
28	30.3	21.3	87	69	8	9	1.5	p a. d° p.
29	25.9	21.4	97	92	9	10	6.1	≡° d° ●° a.
30	30.6	19.9	87	57	8	7	.9	d° a.
Mean	30	21.2	92.1	70.1	8.2	8	------	
Total	------	------	------	------	------	------	210.1	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.8	22.8	83	65	10	10	------	d p.
2	30.5	22.8	97	76	10	10	------	d a.
3	33.5	23.9	79	65	10	9	------	↙ p.
4	29.5	22.5	92	80	8	10	------	d p.
5	32.5	20.1	95	64	5	4	------	♌ ≡° a.
6	34	19.8	92	62	9	6	------	⊕ p.
7	33.1	20.3	95	64	1	10	------	≡° a.
8	33.5	22	88	57	10	9	1.3	d ♉° ◠ ●° p.
9	32.6	21.9	97	62	8	10	------	○a. ♉° d p.
10	32.8	20.9	98	76	6	9	.6	⊤° d ◠ ↙ p.
11	31.8	22.1	96	69	10	5	------	d a. ◠ ↙ p.
12	31.5	20.9	97	80	4	10	.6	♌ ≡° a. ⊤ d p.
13	31.4	20.9	80	64	10	10	.8	d p.
14	28.6	22.1	97	79	10	10	13.9	d ● a. ◠ p.
15	32.5	23.8	83	60	10	6	------	d ⊕ a. ♉² p.
16	32.9	21.5	96	75	7	10	.5	≡° a. ⊤ d p.
17	28.9	21.6	90	70	10	10	------	d a. p. ⌣ p.
18	29.4	23	85	70	10	10	------	d a. ◠ ↙ p.
19	31.6	22.3	87	62	10	7	------	○² a.
20	31.5	22.4	87	64	10	9	------	d a. p.
21	31.5	21.9	95	71	8	8	------	
22	26.5	20.1	90	83	10	10	4.1	d a. p.
23	33.2	22	76	52	10	10	.3	↙ p.
24	33.3	23.9	87	72	10	6	------	d a. ↙ p.
25	33	21.5	96	69	4	8	------	
26	31.5	20	92	62	10	10	------	○° a.
27	31.1	19.3	87	65	5	10	------	
28	30.9	19.3	93	64	10	8	------	○° a.
29	31.4	20	94	64	10	9	------	d a.
30	31.4	21.1	90	64	10	10	------	○° a. p.
Mean	31.6	21.6	90.5	67.7	8.5	8.8	------	
Total	------	------	------	------	------	------	22.1	

METEOROLOGICAL DATA, ETC.—Continued.

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	34	22.5	95	64	8	8	1.3	☌ a. ☾ ● p.
2	30.5	23.2	92	60	10	10	19	☌ a. ☾ ● p.
3	32.8	22.8	96	58	10	8	------	☌ a. ☾° p.
4	28.8	23.5	95	83	7	10	2	☌ ● a. ☾ p.
5	33.7	21.4	87	51	3	4	------	☌ a.
6	33.8	21	95	52	4	7	------	☌ ☰° a.
7	34	21.7	94	50	3	4	------	☌ a.
8	33.1	23.1	86	73	10	9	1.8	☌ a. ● a. p.
9	34.8	22.9	96	54	7	8	1.3	☌ ☿ a. ● p.
10	34	24	96	52	4	9	------	☌ a. ☿ ●° ☾ d p.
11	34	22.7	95	55	4	3	------	☌ a. ☋ p.
12	32.8	22.5	95	65	8	7	------	☌ a.
13	31.8	21	94	53	10	8	6.4	☌ a. ● p.
14	27.2	22.8	93	90	8	10	7.9	● a. p.
15	33.8	22.8	97	52	10	4	------	☾ a. ☋ p.
16	33.2	22.7	96	59	4	8	2	☌ a.
17	31.8	22.9	95	60	10	10	6.4	☾ a. p. ● p.
18	31.7	22.4	96	66	10	10	------	☾ ☽ a.
19	32.8	22.9	93	63	10	10	1.3	☌ a. ☾ p.
20	31.2	21.9	96	87	10	9	8.9	● a. p. ☾ p.
21	32.6	22	97	65	7	10	------	☌ a.
22	25.3	21	87	88	10	10	19	☾ a. p. ● p.
23	32	21.5	88	67	10	9	3.8	● ☾ p.
24	33	23.6	97	62	9	7	------	☾° a.
25	32.4	21.9	96	78	4	9	------	☌ a.
26	30.5	20.4	95	59	4	8	------	☌ ☰° a.
27	32.2	21.2	92	61	8	7	------	☌ a.
28	32.8	21.6	93	55	10	9	------	☌ a.
29	32.6	20.6	95	52	10	4	------	☌ a.
30	33.5	21.8	96	48	4	4	------	☌ a.
Mean	32.2	22.2	93.9	62.7	7.5	7.8	------	
Total	------	------	------	------	------	------	81.1	

SAN FERNANDO, UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.4	23.3	90	68	6	7	------	
2	32.3	23.8	92	75	7	9	------	☾° p.
3	31.6	23.8	93	70	8	10	0.5	
4	30.8	24	93	77	10	10	7.6	p ☍ ☿² ●² a.
5	31.3	23.1	94	68	1	2	------	
6	31.4	21.9	90	62	2	2	------	
7	31.1	23	93	69	1	2	------	☋° p.
8	32.2	21.7	91	61	1	3	------	
9	31.7	22.9	93	66	2	2	------	☿² ☽° p.
10	31.4	22.6	93	66	2	2	------	☿° p.
11	31	22.4	96	68	3	1	------	
12	30.8	22.9	97	69	2	7	------	☾° ☿° p.
13	29.9	22	95	73	5	8	------	
14	28.4	22	93	79	10	10	------	
15	32	23.4	97	66	6	2	------	☾° a. ♃² p.
16	32	22.2	93	70	1	4	22.6	
17	25.8	21.8	95	93	10	10	------	●² a. ☽° p.
18	30.2	22.1	97	74	10	8	------	☾° p.
19	31	23.2	85	68	10	2	3.8	
20	29.7	22.9	90	75	10	8	1	●° ☾² a.
21	30.4	21.6	95	75	5	5	------	
22	26.3	21.9	96	92	10	10	------	☾° p.
23	30.6	22	92	70	10	5	------	
24	30.9	22.8	95	77	3	6	------	☾° p.
25	32	22	97	71	4	4	------	
26	30.3	22.1	97	69	6	7	------	.
27	30.2	21	96	74	2	3	------	☌° a.
28	30	20.1	96	68	1	3	------	☌° a.
29	30.8	19.3	94	73	2	3	------	☌° a.
30	29.9	19.8	95	74	2	5	------	☌° a.
Mean	30.6	22.3	93.8	72	5.1	5.3	------	
Total	------	------	------	------	------	------	35.5	

ECHAGUE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.7	22.4	99	74	10	10	12.2	☿² a. p.
2	30.4	23	99	79	10	10	17.3	●° a. ☾° p.
3	28.2	22.6	99	91	10	10	22.9	●° d a. p.
4	30.8	22.5	99	73	10	5	4.1	☰² ☍ ☿² d² a.
5	32.9	21.8	100	62	10	6	.5	☌² a. ☿² p.
6	32.2	20.3	97	61	10	2	.8	☰ a. ☿² p.
7	31	22.2	98	69	10	10	.5	☿ a. p. ☾° ☋° ☽° ☌° p.
8	31	22.1	99	68	10	7	.5	☌² ☾° a. ☐ ☓° ☿² p.
9	32.7	21.8	98	56	2	4	1	☰ a. ☐ ☓° ●² p.
10	31.7	23.5	97	63	10	4	45.5	☿² a. p.
11	27.9	22.5	99	80	10	10	9.4	☿² a. p.
12	25.7	20.7	100	91	10	10	2.6	☿² a. p. ● p.
13	26.6	20.8	97	82	10	10	30	☾° a. ● a. p.
14	25.1	21.6	100	99	10	10	28.7	☰² ☿² a. ☾° ♃² p.
15	31	21.7	100	76	10	9	3.6	●° ☽° a. p. ☾° p.
16	30.2	22.8	99	68	9	6	68.6	●° ☾° a. ☿² p.
17	22.7	20.7	100	97	10	10	37.9	☽° a. ☿² p.
18	26.3	21.2	99	81	10	10	3.9	☿² a. p. ●° p.
19	26.1	21.4	98	88	10	10	55.9	●° ☿² a. p.
20	27.8	21.2	100	82	10	9	21.1	☾° a.
21	29.5	21.7	97	65	10	9	1.1	● d a. p.
22	24.5	21.6	98	97	10	10	47	● a. ☽° ☿² p.
23	29.6	23	100	77	10	9	12.2	☿² a. p. ☍° p.
24	30.6	23.2	99	76	9	5	9.4	☿² a. p.
25	30.5	22.6	100	74	10	7	2.1	☾° a. p.
26	28.2	21.7	98	76	10	10	.5	☰² a. ☿² p.
27	30	20.7	99	70	9	8	.3	☰² a. ☽° a. p.
28	30.4	20.3	100	64	8	8	------	☌² ☽° a.
29	33.3	19	99	64	8	8	------	☌² a.
30	31.3	21.5	97	64	4	7	------	
Mean	29.2	21.7	98.8	75.6	9.3	8.1	------	
Total	------	------	------	------	------	------	439.6	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.5?	23.1	79	62	10	9	------	☌² a.
2	32.5	24.4	80	68	10	8	1	☌ a. p p.
3	30.1	25.2	80	75	9	10	1.3	☌ d a. p p.
4	30.4	25	83	77	9	10	------	☌ a. d p.
5	30.5	24.9	84	71	4	4	------	☌² a. ☾ p.
6	30.7	22.5	83	71	5	2	------	☌² a.
7	31.1	22.7	84	70	0	3	------	☌² a.
8	30.8	23.7	85	68	1	3	------	☌² a. ☾° ☾ p.
9	30.6	23.7	83	66	2	3	------	☌ a. d ☐ ☓° p.
10	30.2	24.2	83	71	6	9	------	☌² a. ☾ ☿ p.
11	30.2	23.4	87	65	4	2	------	☌² a.
12	30.9?	23.7	74	56	9	8	------	☌ a. ☋ p.
13	30.2	23.2	71	60	7	10	------	☌° a.
14	29	22.7	83	81	10	9	2.5	d ●° a.
15	31.1	24.5	88	73	8	5	------	☌ a. ☍° d p.
16	31.2	24	84	71	2	5	3.6	☌ a. ♃ p p.
17	23.5	22.8	85	90	10	10	21.6	● a. p. d p.
18	29.1	22.5	87	63	10	9	------	d a.
19	31.3	23.6	85	65	10	4	------	d p.
20	30.5	24.4	87	72	10	5	------	d a. ♃° p.
21	31.2	22.5	84	66	8	7	------	☌² a.
22	27.7	22.5	67	82	10	10	------	☾° a. p.
23	29.2	25	88	82	10	8	------	d p.
24	30.3	24.1	90	76	9	7	1.8	☌² a. ☋ p p.
25	30.3	23.8	87	76	4	5	------	☌° a.
26	30.2	23.7	83	68	4	9	------	☌² a.
27	30.2	21.7	83	68	8	4	------	☌² a.
28	29.7	21.2	87	68	3	4	------	☌² a.
29	29.2	19.9	82	59	7	8	------	☌² a.
30	29	19.8	86	63	3	7	------	☌² a.
Mean	30.1	23.3	83.1	70.1	6.7	6.6	------	
Total	------	------	------	------	------	------	31.8	

METEOROLOGICAL DATA, ETC.—Continued.

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.7	25	82	62	9	9	------	↙° a. p.
2	34.1	25.1	81	65	9	9	3.8	● p.
3	34.3	23.6	84	63	10	10	------	d° a.
4	33.8	23	92	57	7	6	------	☊° a.
5	33.1	21.5	96	56	1	2	------	☊² ≡° a.
6	33.9	21	96	60	0	4	------	☊² ≡° a.
7	34	22.1	96	57	0	2	------	☊² ≡° a.
8	32.7	22.2	96	69	0	3	------	☊² a. ⊤ p.
9	32.6	22.5	95	66	1	3	13	☊² ≡° a. ● p.
10	30.8	22.3	98	70	4	5	------	☊² a.
11	29.8	22.5	83	63	4	3	------	↙° a. p.
12	30.9	20.4	75	58	8	6	------	↙° a. p.
13	30.6	20	95	56	4	8	------	☊ ≡° a. ↙° a. p.
14	26.7	23	83	93	10	10	8.4	● a. d° p.
15	32.3	23.2	96	74	9	7	------	d° p.
16	33.3	22.7	98	52	1	7	.8	☊² a. d p.
17	25.8	22	82	94	10	10	43.7	● a. p.
18	29.4	20.2	75	70	10	10	.5	d° a. p.
19	30.6	23.6	80	59	10	5	------	
20	32.1	24.5	75	69	8	6	------	
21	32.9	21.2	91	48	0	4	------	
22	29.9	21.1	87	71	10	10	2.5	↙° a. p. ● ◠ p.
23	29.5	24.6	85	80	10	10	.5	d a.
24	32.4	22.5	99	75	3	6	------	☊² ≡ a.
25	33.2	28.2	99	62	2	4	------	☊² ≡ a.
26	32.7	21.6	91	59	0	3	------	☊² a.
27	32.9	20.4	97	51	1	3	------	☊² ≡ a.
28	31.4	19.7	97	65	0	1	------	☊² ≡ a.
29	32.1	18.5	97	58	0	1	------	☊² ≡ a.
30	31.3	19.4	98	66	0	1	------	☊² ≡° a.
Mean	31.7	22.1	90	64.9	4.7	5.6	------	
Total	------	------	------	------	------	------	73.2	

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.4	24.6	79	72	8	8	9.3	● p.
2	27.9	23.7	83	74	10	8	.8	d² a. ●° p.
3	27.8	23.2	78	73	3	8	.6	●° p.
4	27.9	24.4	88	87	7	10	9	● p.
5	26.4	21.9	87	82	10	10	26.4	● a.
6	27.5	23.4	77	78	10	10	------	↙° a.
7	27.8	24.4	79	79	10	7	------	
8	27	24.4	88	87	5	10	42.2	●² d° p.
9	28.5	22.8	93	90	8	7	3.8	● p.
10	25	22.6	83	80	10	10	1.8	d a. p. ● p.
11	24	21.4	75	67	10	6	------	
12	24.5	21.3	74	69	8	9	------	
13	25.1	21.7	70	65	9	9	3.8	↙° a. ● p.
14	25.9	22.1	82	91	10	10	46.4	● a. p.
15	28	23.8	92	86	10	10	58.2	●² ⌈ p.
16	23.8	21.2	87	79	10	10	18.3	↙° d a. p. ● p.
17	22.7	20.3	83	78	10	10	41.9	↙° d a. p. ● p.
18	21.2	18.9	89	83	10	10	4.8	● a. ↙° d a. p.
19	22.8	19.1	89	89	10	10	5.8	● a. ↙° d a. p.
20	25.8	20	81	78	10	10	------	d° p.
21	25.3	19.9	79	75	10	8	------	↙° p.
22	25.9	23.3	77	75	8	10	42.4	↙° a. p. d p.
23	28	22.8	95	84	10	8	5.5	● d a. ○ d² p.
24	28.8	24.3	93	80	10	7	8.8	◠ a. d a. p. ●° p.
25	28.5	23.6	93	76	5	4	1	●° a. d p.
26	27.5	22.5	92	80	3	6	------	○° ☊ p.
27	28.7	22.9	91	70	2	3	------	v a ☊ p.
28	28.8	22.3	91	76	3	3	8.3	d° ● p.
29	28.4	23.5	89	77	4	3	.8	p° ☊ p.
30	28.7	24.2	87	75	4	4	------	●° v a. ☊ p.
Mean	26.6	22.5	84.8	78.5	7.9	7.9	------	
Total	------	------	------	------	------	------	339.9	

SEISMOLOGICAL BULLETIN FOR NOVEMBER, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

1, 4h 05m. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction, SW–NE; intensity, III; duration, 6 seconds.

4, 21h 33m. **Tacloban** (NE of Leyte). Earthquake of intensity III.

5, 23h 30m. **Borongan** (E of Samar). Oscillatory earthquake of intensity III and 5 seconds' duration.

6, 4h 9m 55s.* **Northeastern Mindanao.** Earthquake of intensity IV, having its origin underneath the Pacific Ocean not far from the northeastern coast of the island. It was perceptible throughout northeastern Mindanao, Leyte, and southern Samar. Although it did not exceed degree IV in the stations of northeastern Mindanao closest to the epicenter, the disturbance was registered not only by the seismographs at Manila, Zikawei, and other Observatories in the Far East, but even at some European stations.

7, 8h 38m. **Northeastern Mindanao.** Earthquake of intensity III, which originated in the same center and was felt in the same region as the one of November 6.

7, 8h 51m. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity III and long duration.

9, 10h 54m 34s.* **Aparri** (NE of Luzon). Oscillatory earthquake. Direction, E–W; intensity, IV; duration, 15 seconds.

11, 11h 43m. **Northeastern Mindanao.** Earthquake of intensity III, perceptible throughout the Surigao Peninsula and in the northern part of the Agusan Valley. Its center appears to have been in the Pacific Ocean, near the northeastern coast of Mindanao, and probably was identical with that of the disturbances on November 6 and 7.

12, 4h 37m. **Surigao** (NE of Mindanao). Earthquake of intensity IV. It would seem that the origin of this earthquake lay on the northeastern coast of Surigao Peninsula and at a very shallow depth.

12, 14h 35m. **Sarangani Island** (S of Mindanao). Earthquake of intensity III.

14, 2h 5m. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity IV and short duration; repeated at 3h 50m with force III.

16, 12h 40m. **Borongan** (E of Samar). Oscillatory earthquake of intensity III, lasting 4 seconds.

21, 1h 6m. **Calbayog** (NW of Samar). Earthquake of intensity II.

21, 3h 03m 34s.* **Samar and Leyte.** Earthquake of intensity III, which was perceptible throughout western Samar and northern Leyte. The difference in intensity observed on the two islands indicates that the origin of the disturbance must be sought north of Biliran Island.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

22, 12h 40m. **Talacogon** (Agusan Valley, Mindanao). Earthquake of intensity IV.

23, 5h 30m. **Sarangani Island** (S of Mindanao). Earthquake of intensity III.

26, 3h 14m 45s.* **Southeastern Mindanao.** Earthquake of intensity V throughout the whole extent of southeastern Mindanao, that is, over an area measuring more than 400 kilometers in the direction N–S. We conclude this from the fact that it was felt with force IV on Sarangani Island, south of Mindanao, and force II at Butuan in the north of the island. On the other hand, it did not exceed V in the intermediate stations situated in the Davao and Agusan districts. Its epicenter lay apparently in the eastern part of Davao Gulf. The disturbance was registered by the seismographs in the Far East; a microseismic movement registered at Hamburg from 3h 27m to 5.4h (time of the 120th meridian east of Greenwhich) may have been due to this earthquake.

26, 16h 18m 26s.* **Southern Mindanao.** Earthquake of intensity VI, felt in the entire south of the island. Its epicenter seems to have been near the coast of Mindanao, to the northwest of Sarangani Island, since on the latter the earthquake had intensity VI. Several aftershocks of less intensity were felt on the 27th, 28th, and 29th. The land area over which this quake was perceptible was only very slightly smaller than that of the preceding, as it was felt in the districts of Cotabato and Davao and the southern part of the Agusan Valley. Nevertheless it was registered only by the seismographs of Manila and Batavia.

27, 5h 25m. **Butuan** (N of Mindanao). Oscillatory earthquake. Direction, NE–SW; intensity, III.

RECORDS OF THE MICROSEISMOGRAPHS.

(Time of the one hundred and twentieth meridian east of Greenwich. Midnight = 0.h)

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2 a.).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
173	6	I_v	V.	4 09 55	----------	4 11 45	4 12 05	0.03	1.6	4 23	Earthquake, IV, northeastern part of Mindanao.
174	9	I_v	V.	10 54 34	----------	10 55 37	10 56 14	.04	2.4	11 07	Vertical component 0.01 mm. Eqke., IV at Aparri (NE of Luzon).
			H. WSW	10 54 34	----------	10 55 37	10 56 09	.03	4.5	11 07	
175	9	II_r	H. NNW	14 11 31	14 19 22?	14 25 36?	14 27 24	.20	8.4	15 42	
			H. WSW	14 11 31	14 18 47?	14 25 20?	14 31 03	.35	9	15 54	
176	10	I_r	V.	20 29 20	20 32 48	20 36 26	20 37 01	.02	5.2	21 05	
			H. NNW	20 29 21	20 32 41	20 36 49	20 37 39	.03	4.8	21 01	
			H. WSW	20 29 21	20 32 55	20 36 57	20 38 41	.08	7.5	21 09	
177	14	II_r	V.	15 37 13	15 39 35	15 42 41	15 47 27	.04	10	17 00	V. C. 0.01 mm. N of Formosa.
			H. NNW	15 37 13	15 39 22	15 42 31	15 47 00	.40	7.8	16 55	
			H. WSW	15 37 13	15 39 24	15 42 46	15 56 38	1.39	8.1	17 02	
178	15	I	V.	22 40 38	----------	----------	----------	------	------	23 22	
			H. NNW	22 40 38	----------	----------	----------	------	------	23 09	
			H. WSW	22 40 38	----------	----------	----------	------	------	23 20	
179	21	I_v	V.	3 03 34	----------	3 04 22	3 04 26	.03	2.4	3 08	Eqke., III in Samar and Leyte.
180	24	I	H. WSW	23 51 ?	----------	----------	----------	------	------	0 20	
181	26	I_v	H. WSW	3 14 45	----------	----------	----------	------	------	3 45	Eqke., V, southeastern part of Mindanao.
182	26	II	V.	12 50 42	----------	----------	----------	------	------	14 16	
			H. NNW	12 50 43	----------	----------	----------	------	------	13 41	
			H. WSW	12 50 42	----------	----------	----------	------	------	13 57	
183	26	I	V.	14 22 35	----------	----------	----------	------	------	15 20	
			H. NNW	14 22 35	----------	----------	----------	------	------	15 10	
			H. WSW	14 22 35	----------	----------	----------	------	------	15 20	
184	26	I_r	V.	16 18 26	----------	16 21 10	16 22 36	.02	5.6	16 51	Southern Mindanao.
			H. NNW	16 18 26	----------	16 21 11	16 22 37	.07	7.2	16 47	
			H. WSW	16 18 26	----------	16 21 08	16 22 06	.13	7.8	16 54	
185	29	II_v	V.	10 28 26	----------	10 30 17	10 34 21	.16	9.2	12 12	V. C. 0.04 mm.
			H. NNW	10 28 26	----------	10 30 07	10 36 47	1.60	8.4	11 51	
			H. WSW	10 28 26	----------	10 29 54	10 36 35	2.60	8.7	12 12	
186	29	II_v	V.	19 47 31	----------	19 49 14	19 49 29	.90	2.4	20 22	V. C. 0.03 mm.
			H. NNW	19 47 31	----------	19 49 13	19 49 38	1.06	6.6	20 16	
			H. WSW	19 47 31	----------	19 49 13	19 50 40	.93	7.8	20 28	
187	29	I_d	V.	23 37 48	----------	23 37 55	23 38 03	.03	2.4	23 41	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=11.8 seconds; WSW–ENE pendulum, T=8.8 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only four to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

101488——3

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

1, 4^h 05^m. **Butuan** (N. de Mindanao). Temblor oscilatorio. Dirección SW–NE; intensidad III; duración 6 segundos.

4, 21^h 33^m. **Tacloban** (NE de Leyte). Temblor de tierra de intensidad III.

5, 23^h 30^m. **Borongan** (E de Sámar). Temblor oscilatorio de intensidad III, duración 5 segundos.

6, 4^h 9^m 55^s.* **NE de Mindanao.** Temblor de tierra de intensidad IV. Tuvo su origen en el Pacífico, no lejos de la costa NE de Mindanao, y fué perceptible en toda la parte NE de la dicha isla, en la Isla de Leyte, y parte S de la Sámar. Aunque en las estaciones de NE de Mindanao más próximas al epicentro, su intensidad no pasó del grado IV, fué sin embargo registrado por los seismógrafos no sólo de Manila, Zikawei, y otras estaciones del Extremo Oriente, sino también por algunos de Europa.

7, 8^h 38^m. **NE de Mindanao.** Temblor de tierra de intensidad III; procedente del mismo origen y sentido en la misma región que el precedente del día 6.

7, 8^h 51^m. **Talacogon** (Valle del Río Agusan, Mindanao). Temblor de tierra de intensidad III y larga duración.

9, 10^h 54^m 34^s.* **Aparri** (NE de Luzón). Temblor oscilatorio. Dirección E–W; intensidad IV; duración 15 segundos.

11, 11^h 43^m. **NE de Mindanao.** Temblor de tierra de intensidad III. Fué perceptible en toda la península de Surigao y en la parte N del valle del Agusan. Su origen parece se hallaba en el Pacífico, cerca de la costa NE de Mindanao, siendo probablemente el mismo de los temblores de los días 6 y 7.

12, 4^h 37^m. **Surigao** (NE de Mindanao). Temblor de tierra de intensidad IV. El origen de este temblor parece fué muy superficial y situado en la costa NE de la península de Surigao.

12, 14^h 35^m. **Isla Sarangani** (S de Mindanao). Temblor de tierra de intensidad III.

14, 2^h 5^m. **Talacogon** (Valle del Agusan, Mindanao). Temblor de tierra de intensidad IV y corta duración. Repitió á 3^h 50^m con intensidad III.

16, 12^h 40^m. **Borongan** (E de Sámar). Temblor oscilatorio de intensidad III, duración 4 segundos.

21, 1^h 6^m. **Calbayog** (NW de Sámar). Temblor de tierra de intensidad II.

21, 3^h 03^m 34^s.* **Sámar y Leyte.** Temblor de tierra de intensidad III. Fué perceptible en toda la parte occidental de Sámar y septentrional de Leyte. Á juzgar por la diferente intensidad que tuvo en ambas regiones, su origen debe colocarse al N de la Isla Biliran.

22, 12^h 40^m. **Talacogon** (Valle del Agusan, Mindanao). Temblor de tierra de intensidad IV.

23, 5^h 30^m. **Isla Sarangani** (S de Mindanao). Temblor de tierra de intensidad III.

26, 3^h 14^m 45^s.* **SE de Mindanao.** Temblor de tierra de intensidad V en toda la parte SE de Mindanao, en una extensión de más de 400 kilómetros en la dirección N–S, puesto que fué sentido con intensidad IV en la Isla de Sarangani (S de Mindanao) é intensidad II en Butuan que está al N; en las estaciones intermedias de los distritos del Agusan y de Dávao no pasó de intensidad V. El epicentro se hallaba al parecer hacia la parte oriental del golfo de Dávao. Fué registrado por los seismógrafos del Extremo Oriente. Probablemente pertenece también á este terremoto la perturbación microséismica registrada por los seismógrafos de Hamburgo entre 3^h 27^m y 5.4^h (tiempo del meridiano 120° E de Greenwich).

26, 16^h 18^m 26^s.* **S de Mindanao.** Temblor de tierra de intensidad VI en toda la parte S de la Isla de Mindanao. El epicentro parece se hallaba cerca de la costa S de la isla, hacia el

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

NW. de la Isla Sarangani, donde tuvo intensidad VI y se sintieron varios repeticiones ó aftershocks de menor intensidad los días siguientes 27, 28, y 29. El área de este terremoto fué dentro de la Isla de Mindanao muy poco menos extensa que la del precedente. Percibióse en los distritos de Cotabato, Davao, y parte S del valle del Agusan. Registráronlo solamente los seismógrafos de Manila y Batavia.

27, 5^h 25^m. **Butuan** (N de Mindanao). Temblor oscilatorio. Dirección NE–SW; intensidad III.

BULLETIN FOR DECEMBER, 1910.

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METEOROLOGICAL BULLETIN FOR DECEMBER, 1910.

By Rev. JOSE CORONAS, S. J.,

Assistant Director of the Weather Bureau.

GENERAL WEATHER NOTES.

Pressure and temperature.—With the exception of a few places in northern Luzon, all the stations show an atmospheric pressure slightly in excess of that for December, 1909. From the normal for the month, however, the pressure at Manila differed by –0.59 millimeters.

The mean temperature was everywhere somewhat higher than for the corresponding month of the preceding year. At Manila the extremes of temperature were 32.7° C. and 18.6° C., the former having been registered on the 4th and 11th, the latter on the 21st.

PRESSURE AND TEMPERATURE AT THE FIRST AND SECOND CLASS STATIONS FOR DECEMBER, 1910.

Station.	Pressure.						Temperature.					
	Mean.	Departure from Dec., 1909.	Highest mean.	Day.	Lowest mean.	Day.	Mean.	Departure from Dec., 1909.	Highest.	Day.	Lowest.	Day.
	mm.	*mm.*	*mm.*		*mm.*		°*C.*	°*C.*	°*C.*		°*C.*	
Tagbilaran	758.37	----------	760.07	28	755.10	3	26.9	+ 0.8	[1]34	24	22.3	28
Surigao	58.08	+ 0.18	60.22	28	55.40	3	25.7	+ .3	30.9	25	22.3	11
Cebu	58.08	+ .13	60.33	28	55.10	3	26.2	+ .3	30.8	2	22	8,21
Iloilo	58.37	— .17	60.56	28	54.95	3	26.2	+ .8	31.6	4	21.9	30
Ormoc	58.27	+ .13	60.47	28	55.70	3	[2]25.2	----------	[2]31.6	25	[2]20.8	28
Tacloban[3]	59.34	----------	61.58	28	56.62	22	25.8	----------	32.5	5	22.4	8
Capiz	58.96	----------	61.27	28	56.09	3	26.3	----------	----------	----------	22.4	8
Calbayog	59	+ .31	61.36	28	56.12	22	25.4	+ .3	32.8	5	20.1	20
Legaspi	59.20	+ .32	61.76	28	56.62	22	26	+ .3	31	16	21.8	20
Atimonan	59.89	+ .24	62.34	28	58.14	23	25.8	+ .8	30.3	5	22.3	21
Paracale	59.97	----------	62.47	28	58.18	23	25.7	----------	30.8	1	21.7	21
Manila	59.84	+ .22	62.61	28	58.40	23	24.8	+ .6	32.7	4,11	18.6	21
San Isidro	59.78	+ .07	62.42	28	58.42	23	24.6	----------	31.4	14	18.2	20
Dagupan	59.45	— .05	62.04	28	58.28	14	25.8	+ .6	34.5	6	19	21
Bolinao	59.31	— .09	61.75	28	58.30	14	26.2	+ .5	33.9	6	19.3	21
Baguio[4]	636.92	+ .14	639.04	28	635.86	22	17.3	+ .7	24.6	1	11.8	21
Vigan	759.70	— .06	761.62	28	758.78	14	26.2	+ .7	34.3	2	19.5	26
Tuguegarao	61.53	— .14	64.30	28	59.66	8	23.6	+ .4	32.6	6	17.7	20
Aparri	62.06	— .25	65.03	28	60.27	8	23.6	+ .2	30.4	6	18.5	20

[1] 25 days of observation only.
[2] 20 days of observation only.
[3] The barometric readings of this station seem to be too high.
[4] The barometric readings of this station are not reduced to sea level.

Precipitation.—The total amount of rainfall during the month was, as a rule, smaller than during December of the preceding year, there being only seven or eight stations which report a total slightly greater than the latter. The amount collected in the rain gauges of the Central Observatory falls short of the amount for December, 1909, by 15.1 millimeters, but exceeds the normal for the month by 47.3 millimeters.

RAINFALL AT VARIOUS STATIONS OF THE WEATHER BUREAU DURING THE MONTH OF DECEMBER, 1910.

Station.	Total.	Departure from December, 1909.	Rainy days.	Departure from December, 1909.	Greatest rainfall in a single day.	Day.	Station.	Total.	Departure from December, 1909.	Rainy days.	Departure from December, 1909.	Greatest rainfall in a single day.	Day.
	mm.	*mm.*			*mm.*			*mm.*	*mm.*			*mm.*	
Isabela, Basilan	155.8	+ 96.1	11	—1	54.9	2	Virac	607.9	—101.7	24	—1	132.1	16
Zamboanga	242	-------	6	------	161	2	Nueva Caceres	453.6	—343.6	19	—6	116.1	22
Davao	314.8	+148.5	8	—4	153.6	2	Batangas	160.5	+ 40.3	14	0	41.7	21
Cotabato	118.8	— 2.2	19	+7	57.9	2	Atimonan	407.9	—106	24	—4	95.8	21
Dapitan	203.9	—187	18	—5	64.5	3	Silang	224	+ 88.9	12	0	61.5	27
Butuan	314.1	—322.5	23	+5	77.7	2	Paracale	637.9	----------	29	------	99.7	16
Dumaguete	177.7	-------	15	------	67.1	24	Santa Cruz, La Laguna	228.3	----------	20	------	80.5	27
Yap, W. Carolines	192.7	— 65.2	22	—2	61	14	Antipolo	112	----------	13	------	50.5	27
Tagbilaran	208.1	—174.4	19	0	54.6	2	Manila	109.8	— 15.1	11	+1	69.6	28
Surigao	652.4	—297.1	24	+5	195	17	Iba	24.2	----------	3	------	21.7	15
Maasin	368.9	—319.2	12	—2	59.4	2	San Isidro	22.7	— 22.4	7	—3	10.4	3
Cebu	146.7	—205	18	—3	29	2	Tarlac	11.2	—122.8	3	—2	7.6	3
Iloilo	151.9	— 93.1	21	—1	35.9	23	Dagupan	.8	— 10.1	1	—4	.8	3
Cuyo	119.1	-------	6	------	97.2	3	Bolinao	.9	— 48.3	2	—2	.8	3
Ormoc	191.5	—123.8	25	+4	37.6	2	Baguio	2.8	— 94.7	3	—7	1.8	3
Tacloban	415.7	— 6.3	28	+3	69.4	2	San Fernando, Union	5.1	— 2.2	1	—3	5.1	3
Capiz	147	—123.4	25	+6	35.2	2	Echagüe	128.2	—148.4	20	—3	36.3	13
Borongan	638.8	—249.8	30	+1	90.2	2	Candon	3.8	— 2.3	1	0	3.8	3
Calbayog	287.7	— 90.8	27	—1	49.9	2	Vigan	.8	— 12.5	1	—2	.8	31
Masbate	218.5	— 89.8?	24	+5	39.2	2	Tuguegarao	263.1	+ 76.9	9	—4	129.8	13
Legaspi	653.5	+ 4.6	27	+4	61.2	16	Laoag	1.3	— 53.3	1	—2	1.3	13
Romblon	312.7	+ 41.3	26	—2	41.1	3	Aparri	269	— 55	17	—5	75.6	12
Sumay, Guam	123.2	—131	20	—2	27.9	15	Sto. Domingo, Batanes Is.	361.7	+143.8	25	—1	72.6	4
Calapan	200.6	—127	26	—1	44	28							

DEPRESSIONS AND TYPHOONS.

Manila Observatory announced during this month the existence of one typhoon and two depressions, one of which latter, however, recurved very far from the Philippines. The approximate paths of these atmospheric disturbances may be seen on Plate XVIII which, according to the promise made in the Bulletin for the preceding month, contains likewise the tracks of the depressions and typhoons of November.

THE TYPHOON OF MINDANAO, NOVEMBER 28 TO DECEMBER 6, 1910.

This typhoon seems to have formed in the southern part of the Western Carolines on November 28 and 29. The few data on hand are insufficient to give more than a fair degree of probability to the first part of its track, that is to say, until the storm was near the Pelew Islands. Luckily there happened to be at the time in the neighborhood of these islands the German cruiser *Cormoran,* and thanks to the valuable observations which the commander of the said ship forwarded to this Office through our volunteer observer on Pelew Island, the Rev. Fr. Salvator, O. M. C., we have been able to trace the track of this typhoon with considerable accuracy from the evening of November 30 onward. These observations, contained in the following table, show that the storm passed close to the south of the Pelew Group during the early hours of December 1, moving almost due west:

METEOROLOGICAL OBSERVATIONS MADE ON BOARD THE GERMAN CRUISER "CORMORAN," NOVEMBER 30 AND DECEMBER 1, 1910.

Date and hour.	Pressure.	Wind.		Weather.	Remarks.
		Direction.	Force.		
November 30:	*mm.*		*0–12.*		
4 p. m.	756.2	NE	1	o,r	
8 p. m.	55.8	NW	1	c	
Midnight	55.6	NE	2	o(r)	At 12.20 a. m. of December 1 a sudden wind of force 4 (6) sprang up from ENE, accompanied by heavy rain squalls. At 1.40 the wind increased to 5 (6); the sky was covered by heavy Nimbus clouds which moved very rapidly in the direction of the wind. Shortly after 4 a. m. the wind veered to E, force 6 (7). The rain squalls continued, and the wind was very unsteady. From 5 a. m. to 11.40 a. m. the latter oscillated continually between EbyN and SE. At 7.30 a. m. commenced wind squalls of force 8; but after 8 a. m. the wind fell off and was steady by noon. At 2 p. m. the rain squalls ceased likewise.
December 1:					
1 a. m.	54.5	ENE	4 (6)	o,q,r	
2 a. m.	53.6	ENE	5 (6)	o,q,r	
3 a. m.	52	ENE	5 (6)	o,q,r	
4 a. m.	51.6	ENE	6 (7)	o,q,r	
4.30 a. m.	52.7	E	6 (7)	o,q,r	
5 a. m.	52.8	E	5 (6)	o,q,r	
5.30 a. m.	53	E	5 (6)	o,q,r	
6 a. m.	52.6	NE	5 (6)	o,q,r	
6.30 a. m.	53.3	E	5 (6)	o,q,r	
7 a. m.	53.6	E	5 (6)	o,q,r	
7.30 a. m.	54.4	EbyS	6 (8)	o,q,r	
8 a. m.	54.8	EbyS	6 (8)	o,q,r	
8.30 a. m.	54.9	SE	5 (7)	o,q,r	
9 a. m.	54.9	SE	5 (7)	o,q,r	
9.30 a. m.	54.7	SE	5 (7)	o,q,r	
10 a. m.	54.8	SE	5 (7)	o,q,r	
10.30 a. m.	54.8	E	4 (6)	o,q,r	
11 a. m.	54.5	E	4 (6)	o,q,r	
11.30 a. m.	54.2	E	4 (6)	o,q,r	
Noon	53.7	SE	4 (6)	o,q,r	
1 p. m.	53.4	SE	4 (5)	o,q,r	
2 p. m.	53	SE	4 (5)	o,q,r	
3 p. m.	53.2	SE	4	o,q	
4 p. m.	53.2	SE	3	o,q	
8 p. m.	55.1	SE	2	o	

Manila Observatory issued the first warning in connection with this typhoon in the morning of December 1 in the following terms:

December 1, 8.45 a. m.: Typhoon east of the Pelew Islands, moving west.

The ordinary daily weather note made this reference to the storm:

December 1, 11.45 a. m.: There are signs of a depression over the Pacific southwest of Yap, moving westward.

Although telegraphic communication with Mindanao was interrupted, the Observatory was able to locate the vortex east of the said island during the afternoon of the 2d and to ascertain that it was approaching the latter. Hence, the following warning was telegraphed to the stations in the Visayas:

December 2, 3.15 p. m.: Typhoon east of Mindanao, moving west.

The observations made at our station of Davao, which form the contents of the following table, indicate clearly that the center passed very near to that station. The destruction caused by the violent hurricane in Davao as well as in Mati, is known to have been very considerable. Great were likewise the losses, due to extraordinary inundations, at Zamboanga and other important towns of Mindanao.

METEOROLOGICAL OBSERVATIONS AT DAVAO, DECEMBER 2 AND 3, 1910.

Date and hours.	Pressure.	Wind.		Weather.	Rainfall (daily total).	Remarks.
		Direction.	Force.			
December 2:	*mm.*		*0-12.*		*mm.*	
6 a. m.	755.39	Calm		o		
Noon	53.87	NW	1	o		
1 p. m.	52.59	WNW	4	o,q		Heavy rain squalls.
2 p. m.	49.83	NtoW	5	o,q		Do.
3 p. m.	49.24	NtoW	8	o,q		Do.
4 p. m.	48.02	NtoW	10	o,q		Heavy rain squalls and thunder to SW.
4.30 p. m.	45.02	NtoW	11	o,q		Heavy rain squalls.
5 p. m.	44.02	NtoW	12	o,q		Do.
5.30 p. m.	43.28	NtoW	12	o,q		Do.
6 p. m.	43.69	NtoW	12	o,q		Do.
6.30 p. m.	45.29	NtoW	11	o,q		Do.
7 p. m.	45.49	NtoW	11	o,r		Slight rain.
7.30 p. m.	48.12	StoE	8	o,r		Do.
8 p. m.	49.82	StoE	11	o,r		Do.
8.30 p. m.	50.58	StoE	8	o,r		Do.
9 p. m.	55.84	Calm		o,r	153.6	Do.
December 3:						
6 a. m.	?	Calm		c		
2 p. m.	55.29	NNE	1	c		

In the vicinity of Davao, the typhoon track suffered a deflection which caused the storm to pass almost midway between the stations of Cagayan de Misamis and Cotabato during the night of December 2 to 3. In the morning of December 3, the vortex entered the Sulu Sea, moving again with a strong westerly inclination.

The following typhoon notices were sent by Manila Observatory to Tokyo, Zikawei, Taihoku, Hongkong, and Phulien:

December 3, 8.30 a. m.: Typhoon crossing Mindanao, moving west.
December 4, 10 a. m.: Typhoon west of Palawan, moving west or west-northwest.

By Hongkong Observatory we were favored with these cablegrams:

December 4, noon: Typhoon northwest of Palawan, moving west-northwest.
December 5, noon: Typhoon east of southern Annam, moving west.

The following observations were made on board the steamer *Suisang* which was at the time between parallels 8° and 10° north and the meridians 109° and 112° east, and felt the influence of the typhoon in the form of heavy seas and violent winds from the fourth and third quadrants. Nevertheless, the barometer (aneroid) fell relatively little; which leads us to suspect that the instrument is not reliable.

METEOROLOGICAL OBSERVATIONS MADE ON BOARD THE STEAMER "SUISANG," DECEMBER 1 TO 5, 1910.

[Captain, M. Picknell.]

Date and hour.	Position.		Pressure.	Wind.		Remarks.
	Latitude N.	Longitude E.		Direction.	Force.	
December 1:	° ′	° ′	*mm.*		*0–12.*	
4 p. m.	Singapore.		755.65	Calm		Fine and clear weather.
8 p. m.			57.43	NNE	2	Light breeze, smooth sea, fine and clear weather.
December 2:						
Noon	3 7	105 23	59.97	Variable	1	Slight southerly sea, overcast and clear.
Midnight			58.70	NE	2	Light breeze, smooth sea, overcast and clear.
December 3:						
4 a. m.			58.19	ENE	3	Gentle breeze, smooth sea, cloudy and clear.
Noon	6 —	107 44	59.72	NE	3	Do.
8 p. m.			59.72	NE	3	Do.
Midnight			59.46	NE	4	Moderate breeze, smooth sea, cloudy and clear.
December 4:						
4 a. m.			57.43	NEbyN	5	Fresh breeze, slight sea; dull, overcast and clear.
Noon	8 20	109 56	57.94	N	6	Strong wind, heavy sea, cloudy and clear.
8 p. m.			57.18	NNW	6	Strong wind, heavy northerly sea, dull sky and clear.
Midnight			56.16	NWbyN	7	Moderate gale, violent squalls, heavy northerly sea.
December 5:						
4 a. m.			54.13	WNW	8	Fresh gale, violent squalls, heavy northerly sea.
8 a. m.			56.16	WbyN	7	Moderate gale, squally, heavy northerly swell and confused sea.
Noon	9 43	111 25	57.68	SW	4	Moderate breeze, long confused swell, cloudy and clear.
4 p. m.			55.65	S	3	Gentle breeze, heavy northerly swell, fine and clear.
8 p. m.			58.70	ESE	3	Do.
Midnight			59.72	E	3	Do.

The vortex penetrated into Annam north of, and very close to, Nhatrang, where at 4 p. m. of the 5th, the barometer fell to 744.8 millimeters, with hurricane winds from west-northwest. During the 5th, the typhoon was moving in a northwesterly direction.

We subjoin the notices issued by Zikawei Observatory to the stations on the Chinese coast:

December 1, 10 a. m.: Typhoon over the Caroline Islands, moving west.
December 3, 11.30 a. m.: Typhoon south of Luzon, moving west.
December 3, 9 p. m.: Typhoon south of Luzon, moving northwest.

THE DEPRESSIONS OF DECEMBER 13 TO 23, 1910.

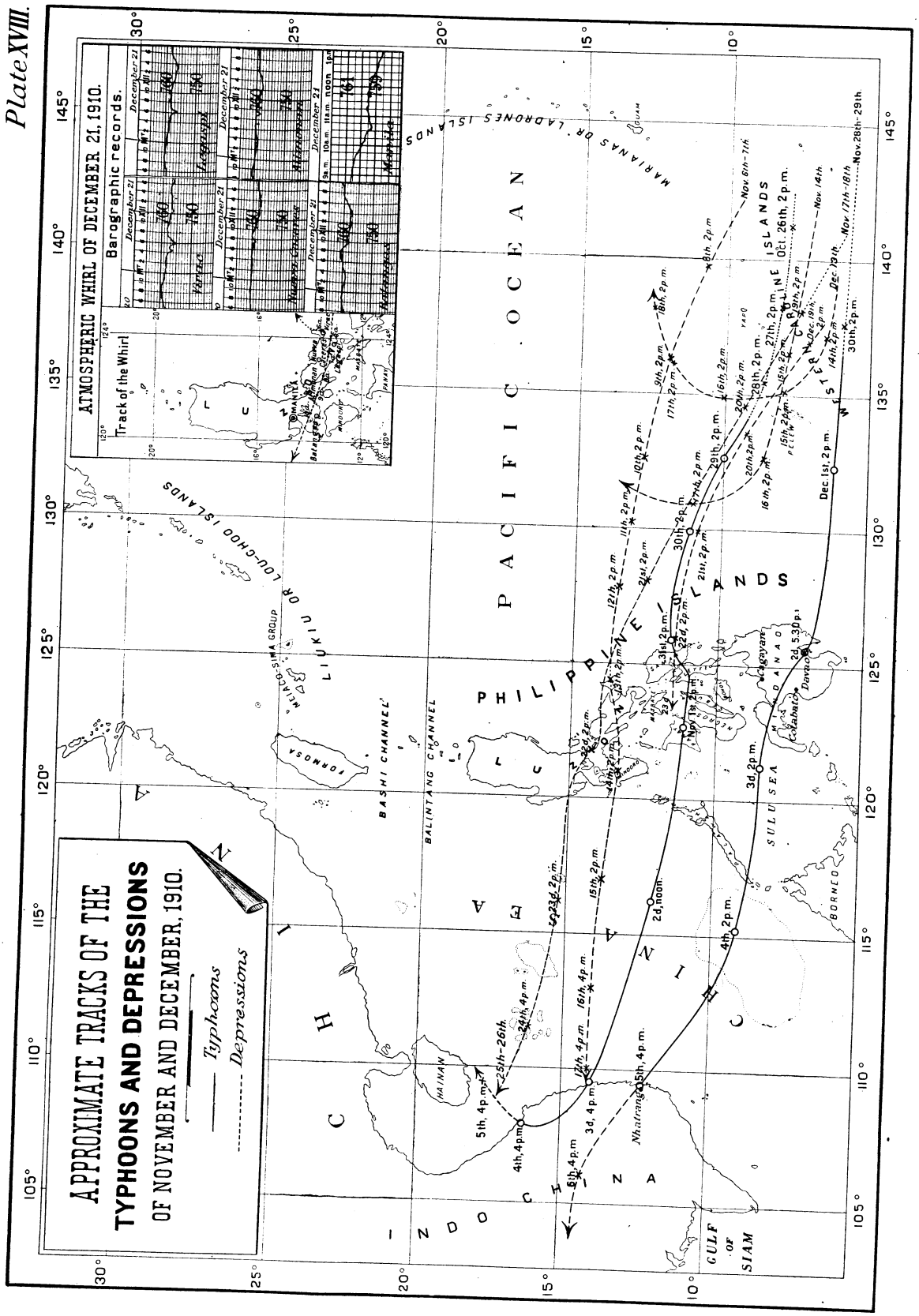
During the interval of ten days lying between December 13 and 23, two depressions succeeded each other over the Pacific Ocean. The first of these recurved in the Pacific to the west of Yap, the second began to fill up before it entered the Archipelago and disappeared entirely after having crossed southern Samar. Their probable tracks may be seen on Plate XVIII.

THE ATMOSPHERIC WHIRL OF DECEMBER 21, 1910.

The progress of this whirl is so clearly marked in the barograph curves of Virac, Legaspi, Nueva Caceres, Atimonan, and Batangas that there can be hardly any doubt whatever either of its existence, or of its path, or of its extraordinary velocity of translation. Though the latter, together with the very small diameter of the whirl, made it resemble a tornado, the whole phenomenon was of little or no importance. Nevertheless, as it is exceedingly rare that such whirl can be observed, and still more so that it can be followed from hour to hour, we believe that it will interest our readers to see the barograms mentioned reproduced, as we have done on Plate XVIII, together with the track of the whirl across southern Luzon. The velocity of translation of the phenomenon must have been approximately 40 miles per hour.

The westerly winds which were observed in Virac during the whole morning of the 21st seem to show that besides the whirl that traversed southern Luzon there was another one moving rather inclined to the north toward Catanduanes Island (See Plate XVIII).

Plate XVIII.


APPROXIMATE TRACKS OF THE
TYPHOONS AND DEPRESSIONS
OF NOVEMBER AND DECEMBER, 1910.
Typhoons
Depressions
ATMOSPHERIC WHIRL OF DECEMBER 21, 1910.
Barographic records.
Track of the Whirl
PACIFIC OCEAN
PHILIPPINE ISLANDS
CHINA
FORMOSA
LIUKIU OR LOO-CHOO ISLANDS
BASHI CHANNEL
BALINTANG CHANNEL
HAINAN
GULF OF SIAM
SULU SEA
BORNEO
MARIANAS OR LADRONES ISLANDS
CAROLINE ISLANDS
Nov 6th-7th
Nov 14th
Nov 17th-18th
Nov 28th-29th
Dec 1st, 2 p.m.
Dec 19th
Oct. 26th, 2 p.m.
30th, 2 p.m.
Nhatrang
Davao
Cagayan
Zamboanga
105°
110°
115°
120°
125°
130°
135°
140°
145°
30°
25°
20°
15°
10°

NOTAS GENERALES DEL TIEMPO.

Presión y temperatura.—Á excepción de algunas estaciones en el norte de Luzón, las demás nos dan una media mensual de la presión atmosférica algo superior á la de Diciembre, 1909. Con todo, la de Manila se diferencia de la normal de este mes en —0.59 mm.

La media temperatura mensual es en todas las estaciones ligeramente mayor que la del año anterior. Las temperaturas extremas para Manila fueron 32.7°C y 18.6°C: aquélla se registró los días 4 y 11, y ésta el día 21.

Precipitación acuosa.—El total de lluvia de este mes es generalmente menor que el de Diciembre del año pasado, siendo solamente 7 ú 8 las estaciones que nos dan una suma algo mayor. La cantidad de agua recogida en los pluviómetros del Observatorio es inferior á la de Diciembre, 1909, en 15.1 milímetros, pero superior á la normal de este mes en 47.3 milímetros.

DEPRESIONES Y TIFONES.

Un tifón y dos depresiones anunció este mes el Observatorio de Manila, si bien una de dichas depresiones recurvó á grande distancia de Filipinas. Vean nuestros lectores las trayectorias aproximadas de estas perturbaciones atmosféricas en la lámina XVIII. Según dijimos en el Boletín del mes anterior, incluímos también en la misma lámina las trayectorias de las depresiones y tifones de Noviembre.

TIFÓN DE MINDANAO, 28 DE NOVIEMBRE Á 6 DE DICIEMBRE, 1910.

Este tifón parece haberse formado durante los días 28 y 29 de Noviembre en los alrededores de la región meridional de las Carolinas Occidentales. Los pocos datos que poseemos nos impiden dar un valor más que algo probable á la primera parte de la trayectoria de este baguio hasta que se halló cerca de las Islas Palaos. Afortunadamente se encontraba á la sazón en aquellas islas el crucero alemán *Cormoran,* y gracias á las preciosas observaciones que su comandante se dignó remitirnos por medio del Rev. P. Salvator, O. M. C., nos ha sido fácil trazar con bastante aproximación la trayectoria de este tifón desde la tarde del día 30. Publicamos estas observaciones del *Cormoran* en una tabla en el texto inglés. Por ellas se ve que el vórtice pasó por el sur y no muy lejos de Palaos la madrugada del 1.º de Diciembre, moviéndose casi exactamente al W.

El Observatorio de Manila envió su primer anuncio de tifón la mañana del 1.º de Diciembre en estos términos:

Día 1, 8.45 a. m.: Tifón al E de las islas Palaos, moviéndose al W.

Y en la nota ordinaria del tiempo del mismo día se decía lo siguiente:

Día 1, 11.45 a. m.: Hay indicios de una depresión en el Pacífico al SW de Yap, moviéndose aparentemente hacia el W.

La tarde del día 2, á pesar de hallarnos incomunicados con Mindanao, todavía pudo el Observatorio de Manila situar el vórtice al E de aquella isla y moviéndose en dirección á la misma. Véase á continuación el aviso de tifón que se envió á 3.15 p. m. á las estaciones de Visayas:

Día 2, 3.15 p. m.: Tifón al E de Mindanao, moviéndose al W.

Las observaciones hechas en nuestra estación de Dávao indican perfectamente que el vórtice pasó muy cerca de aquella población. Los destrozos causados por la fuerza del huracán así en Dávao como en Mati consta que fueron de mucha consideración. Grandes fueron también las pérdidas causadas por extraordinarias inundaciones que tuvieron lugar en Zamboanga y otras poblaciones importantes de aquella Isla.

La trayectoria de este baguio sufrió una inflexión hacia el NW desde las cercanías de Dávao y así vino á pasar por entre Cagayán de Misamis y Cotabato y casi á igual distancia de ambas estaciones durante la noche del 2 al 3 de Diciembre. La mañana del día 3 entraba el vórtice en el Mar de Joló moviéndose otra vez muy inclinado al W.

Hé ahí los avisos de tifón que el Observatorio de Manila trasmitió á Tokio, Zikawei, Taihoku, Hongkong y Phulien los días 3 y 4:

Día 3, 8.30 a. m.: Tifón cruzando Mindanao, moviéndose al W.
Día 4, 10 a. m.: Tifón al W de Palawan, moviéndose al W ó WNW.

Del Observatorio de Hongkong recibimos los siguientes telegramas los días 4 y 5:

Día 4, mediodía: Tifón al NW de Palawan, moviéndose al WNW.
Día 5, mediodía: Tifón al E del S de Annam, moviéndose al W.

En el texto inglés damos las observaciones hechas á bordo del vapor *Suisang,* el cual, hallándose entre los paralelos 8° y 10° lat. N y los meridianos 109° y 112° long. E de Greenwich, sintió la influencia de este tifón con mucha mar y chubascos violentos del 4.º y 3.er cuadrantes. Sin embargo, el barómetro (aneroide) bajó relativamente poco, lo cual nos hace sospechar si tal vez el aparato es de poca confianza.

El vórtice penetró en Annam por el norte y muy cerca de Nhatrang donde el barómetro había bajado á 4 p. m. del día 5 hasta 744.8 mm. con vientos huracanados del WNW. El baguio se movía el día 5 al NW.

Del Observatorio de Zikawei son estos avisos de tifón trasmitidos á las estaciones de la costa de China:

Día 1, 10 a. m.: Tifón en las Carolinas, moviéndose al W.
Día 3, 11.30 a. m.: Tifón al S de Luzón, moviéndose al W.
Día 3, 9 p. m.: Tifón al S de Luzón, moviéndose al NW.

DEPRESIONES DE 13 Á 23 DE DICIEMBRE, 1910.

Dos depresiones se sucedieron una á otra en el Pacífico durante este intervalo de 10 días: la primera recurvó en el mismo Pacífico al W de Yap, y la segunda empezó á rellenarse antes de entrar en el Archipiélago hasta que desapareció del todo, después de haber atravesado la parte sur de Sámar. Véanse las trayectorias probables de ambas depresiones en la lámina XVIII.

REMOLINO DE 21 DE DICIEMBRE, 1910.

El paso de este remolino aparece tan marcado en las curvas barográficas de Virac, Legaspi, Nueva Cáceres, Atimonan y Batangas, que apenas puede caber la menor duda ni de su existencia, ni de su trayectoria, ni de su extraordinaria velocidad de traslación. Aunque esta velocidad extraordinaria y lo reducido del diámetro de este remolino parecerían asemejarlo á un tornado, lo cierto es que todo el fenómeno fué en realidad de muy poca ó ninguna importancia. Sin embargo, como sucede raras veces que se pueda observar un remolino de esta clase y aun seguirle de hora en hora en su movimiento de traslación, hemos creído sería de interés á nuestros lectores ver por sí mismos los barogramas mencionados, y así los reproducimos en la lámina XVIII, juntamente con la trayectoria del remolino á través del sur de Luzón. La velocidad de traslación de este meteoro hubo de ser aproximadamente de unas 40 millas por hora.

Los vientos de la parte del W que se observaron en Virac durante toda la mañana del 21 parecen indicar que además del remolino que atravesó el sur de Luzón hubo otro que se movió más inclinado al norte en dirección á Catanduanes. (Veáse la lámina XVIII.)

METEOROLOGICAL DATA FOR MANILA CENTRAL OBSERVATORY.[1]

[ϕ=14° 34′ 41″ N; λ=120° 58′ 33″ E; barometer above sea, 14.2 meters; gravity correction not applied, —1.72 mm.]

Date.	Pressure, mean.	Air temperature.[2] Mean.	Air temperature.[2] Maximum.	Air temperature.[2] Minimum.	Underground temperature. 0.25 meter. 8 a. m.	0.25 meter. 2 p. m.	0.50 meter. 8 a. m.	0.50 meter. 2 p. m.	1.50 meters. 8 a. m.	2.50 meters. 8 a. m.	Relative humidity, mean.	Vapor pressure, mean.	Evaporation.[2] Free exposure, total.	Evaporation.[2] Shelter, total.
	mm.	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	*Per ct.*	*mm.*	*mm.*	*mm.*
1	759.22	25.5	31.7	20.3	26.3	27.7	27.3	27.5	28	28.2	82	19.6	2.9	2.2
2	59.47	24.5	29	21.7	26.9	27.3	27.5	27.5	28	28.2	90.5	20.7	.3	1
3	58.58	24.4	29.6	21.8	26.6	27.2	27.3	27.2	28	28.2	87.3	19.7	1	1.4
4	59.24	26.3	32.7	22.4	26.4	27.3	27.2	27.4	27.8	28.2	84.8	20.7	2.7	2.4
5	60.67	26.1	32.1	22.2	26.8	27.9	27.2	27.6	27.9	28.2	82.5	20.5	3	2.4
6	60.72	26	32.5	20.9	26.7	27.8	27.3	27.3	27.9	28.1	80.5	19.9	3.5	2.7
7	59.52	25.1	30.8	21.9	27	27.5	27.3	27.5	27.8	28.1	86.7	20.4	1.4	1.4
8	59.10	24.8	30.8	20	26.6	27.8	27.5	27.6	27.9	28	82.1	18.8	3	2.5
9	59.05	24.4	30.8	19.6	26.3	27.6	27.3	27.3	27.8	27.9	81.9	18.5	2.9	2.3
10	59.33	24.4	30.2	19.7	26.2	27.4	27.1	27.4	27.8	27.9	83.2	18.7	2.8	2.2
11	59.84	26.1	32.7	21.6	26.3	27.6	27.1	27.6	27.8	28	77.3	19.2	3.7	2.7
12	59.53	25.4	31.3	22.3	26.7	27.8	27.2	27.6	27.8	28	83.3	20	1.4	1.7
13	58.93	25.1	30.4	21.9	26.6	27.7	27.2	27.5	27.8	28.1	88.1	20.7	1.9	1.2
14	58.58	25.4	31.8	22.2	26.7	28	27.2	27.5	27.8	28.1	86	20.6	2.1	1.3
15	58.83	25.6	29.8	22.9	26.9	27.8	27.4	27.5	27.7	28.1	85.4	20.8	2	1.6
16	59.64	25.6	31.2	22.3	26.7	28	27.3	27.6	27.7	28	79.8	19.3	3.8	3.2
17	59.46	25	30.9	21.6	26.6	27.3	27.3	27.4	27.7	28.1	77.7	18.1	2.6	2.3
18	60.24	24.2	30.1	20.5	26.1	27.1	27.1	27.4	27.6	28	78.1	17.3	3.5	3
19	60.43	24.2	31.1	19.5	25.6	27.2	27	27.1	27.7	28	75.6	16.6	3.9	3.6
20	60.08	23.5	28.8	18.9	25.4	26.8	26.8	26.9	27.6	27.9	81.1	17.3	2.4	1.5
21	59.53	23.7	29.8	18.6	25	26.6	26.6	26.7	27.6	27.8	81.8	17.6	2.3	1.9
22	58.78	24.5	29.1	21.8	25.9	26.6	26.6	26.7	27.6	27.9	82	18.6	2.6	2.2
23	58.40	25.1	30.3	20.8	25.5	26.9	26.5	26.8	27.6	28	76.8	18.1	4.2	3.5
24	59.40	25.1	30.9	22.3	26	27.2	26.7	26.8	27.6	27.9	75.8	17.8	3	2.6
25	60.59	25	29.9	20.6	25.8	27.2	26.7	26.8	27.7	28	78	18.3	2.9	2.4
26	60.48	25.4	29.4	22.2	26.1	27.1	26.8	26.9	27.6	28.1	82.8	19.8	2.3	1.8
27	61.41	24.7	29.5	21.8	26	27.1	26.8	26.9	27.7	28	88.9	20.3	.9	1.2
28	62.61	23.2	24.3	22	25.9	25.7	26.6	26.5	27.5	28	94.8	20	.1	.4
29	61.67	23.8	29.5	20.3	25	26.3	26.3	26.4	27.6	28	84.3	18.2	2.7	2.1
30	61.06	23.5	29	19.3	25	26.1	26.1	26.3	27.4	28	85.4	18.3	2.4	1.8
31	60.80	23.4	30.5	19.2	25.1	26.5	26.2	26.4	27.4	28	82.7	17.6	2.5	2.2
Mean	759.84	24.8	30.3	21.1	26.2	27.2	27	27.1	27.7	28	82.8	19.1	2.5	2.1
Total													76.7	64.7
Departure from normal	—0.59	—0.4	+0.6	—0.1							+1.5	—0.1		

Date.	Wind. Prevailing direction.	Wind. Total movement.	Wind. Maximum hourly velocity.	Wind. Direction at the time of the maximum velocity.	Clouds. Amount, mean.	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Sunshine.	Rain, 24 hours beginning midnight.	Miscellaneous.
		Km.	*Km.*		*0–10.*			*h.* *m.*	*mm.*	
1	NE quad.	116	12	NE	6.2	Ci.	Cu. E	8 25		
2	NE quad.	165	20.5	N	9.7	Ci.-S. SEbyS	Cu.-N. E	0 30	5.1	☾ a. ● p.
3	NE quad.	182	17.5	EbyN	9.9	Ci.-S.	S.-Cu. E	0 00	10	● a. p.
4	ESE	192	26	ESE	8.2	A.-Cu. SE	S.-Cu. EbyS	2 30	1.3	☾ ● p.
5	SE quad.	165.5	20	SE	5.8	A.-Cu. ESE	Cu. EbyS	5 05	.1	☾° a. ≡° a. p.
6	NE quad.	140.5	14.5	E	3.8	Ci.-S.	Cu. E	7 35		
7	Variable	71.5	7	NE	7.8	A.-Cu.	Cu.-N. E	3 00		≡° ☾° a.
8	W	104	13.5	W	2.9	Ci.-Cu. SSW	Cu. E	8 35		☊ ≡ a. ≡° p.
9	SE quad.	92.5	10	WSW	2.7		Cu. ENE	8 45		☊² ≡ a.
10	Variable	91	12	ESE	6.8	A.-Cu. ESE	Cu. E	4 45		≡° a. ☾° p.
11	NE quad.	139.5	12	NNE, ENE	6	Ci. SWbyW	Cu. E	7 00		
12	NE quad.	101.5	9	NNE	7.8	A.-Cu. ENE	Cu.-N. E	5 15	1.7	●° p.
13	NE quad.	142.5	16.5	NE	9.5	A.-Cu. S	S.-Cu. E	1 25	1	≡° a. ●° ⌒ p.
14	NE quad.	134	10	NNE	5	Ci. SW	Cu. NE	5 55		≡° a. p° p.
15	NE quad.	107.5	9.5	NW	8.3	A.-Cu. E,SE	N.-cf. NE	1 40		
16	NNE	255	24	NbyE	8.2	A.-Cu. E,SE	Cu. ENE	2 25	.1	≡° a. ☾° p.
17	NNE	132.5	14	NNE	9.4	A.-Cu. SE	Cu. E	1 55	.2	☾°, ≡° a.
18	E quad.	167	20	E	7.3	A.-Cu. SW	S.-Cu. E	2 00		≡° a.
19	E	151	19.5	E	3.2	A.-Cu.	Cu. ESE	6 35		≡° a.
20	W quad.	118.5	13	WNW	8.3	Ci.-S.	Cu. E quad.	2 45		≡° a. p.
21	N quad.	123	24	NNW	8.2	A.-Cu. E	Cu.	3 00	.5	≡° a. ●° p.
22	NE quad.	141	16	NE	9.5	Ci.-S.	Cu.-N. NE	1 05		≡° a. ☾° a. p.
23	NNE	348.5	34	NNE	9.8	A.-Cu.	S.-Cu. NE	0 20		
24	NNE	96.5	13	NW	9	Ci.-S. S	S.-Cu. E	2 20		≡° p.
25	N quad.	102.5	8.5	SW	8.4	Ci.-S.	Cu. ENE	3 40		≡° p° ⌒ p.
26	NNE	135.5	16.5	NNE	9.1	A.-Cu.	S.-Cu. E	2 25		≡° ☾° p.
27	Variable	58	11.5	WNW	9.7	Ci.-S.	Cu.-N. E	1 05	20.2	≡° a. ● p.
28	E quad.	86	9	NE	10		N. SE	0 00	69.6	● a. ●° p.
29	ESE	105.5	16.5	EbyS	7.9	Ci.	N.-cf. ENE	4 05		≡ a. p.
30	ESE	125	11	ESE	8.6	Ci.-S. ENE	Cu. ENE	1 55		≡° a.
31	E quad.	77	14	NW	6.8	Ci. SSE	S.-Cu. E	4 05		≡° a.
Mean		134.4	15.3		7.5			3 33		
Total								110 05	109.8	
Departure from normal		—20.9			+ 1.4			—48 29	+47.3	

[1] All the mean values given in this table are deduced from hourly observations.
[2] These values are taken from instruments mounted in the Observatory park, 1.5 meters above ground.

METEOROLOGICAL DATA FOR FIRST AND SECOND CLASS STATIONS.[1]

TAGBILARAN.

[ϕ=9° 38′ N; λ=123° 51′ E; barometer above sea, 21.8 meters; gravity correction not applied, —1.86 mm.]

Day.	Pressure (mean).	Temperature.[2] Mean.	Maximum.	Minimum.	Relative humidity (mean).[2]	Wind.[2] Prevailing direction.	Force (mean).	Clouds.[2] Amount (mean).	Prevailing form and its direction. Upper.	Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.73	26.4	------	23.4	85	Variable	1.2	9	A.-S.	Variable	1	d p.
2	56.68	26	------	23.2	82.6	Variable	1.6	10	A.-S.	Fr.-N. ENE	54.6	●° a. ●² p.
3	55.10	27.1	------	23.3	76.8	S quad.	3	10	A.-S. SE, SW	Cu.	3.3	● a. p.
4	58.82	27.6	------	24.4	80	Variable	1	7.4	A.-S. ENE	Cu.-N., Cu. E	------	d° a.
5	59.82	27.4	------	23.4	77.8	Variable	.8	4.4	A.-S. E	Cu.	1.8	
6	59.13	26.9	------	23.3	78.6	SE, WSW	1.2	8	A.-S. NE	Cu.-N. ENE	------	●° a.
7	57.91	27.1	33.5	23.4	81.2	S quad.	1.2	7.2	----------	Cu.-N. ENE	------	
8	58.25	26.9	33.3	22.7	75.4	NE, SE	1.6	5.4	Ci.-S.	Cu. ENE	------	
9	57.48	27.8	33.8	23.5	76	SE, NE	1.4	5.8	Ci.-S.	Cu., Cu.-N. NNE	.3	◟ ◸ ●° p.
10	58.12	26.8	31.7	23.8	81.1	S quad.	1.4	6.4	Ci.-S.	N. ENE	37.9	● a. ●² ◸ d p.
11	58.79	26.9	32.2	23.3	80.2	WSW, NE	1	8.6	Ci.-S. ENE	S.-Cu. ENE	------	
12	58.44	26.5	31.5	23.2	81.8	E quad.	1	9.8	A.-S.	Cu.-N. ENE	8.7	● d p.
13	57.30	26.8	32.5	23.4	83.2	S quad.	1	8.4	Ci.-S.	N. ENE	.8	● a. ◡ p. d a. p.
14	57.23	26.9	31.9	23.1	83.1	Variable	1	9.4	A.-S.	Cu.-N. ENE	3.8	● d p.
15	57.74	26.8	31.2	24.3	83.3	E quad.	.6	10	A.-S.	Fr.-N. ENE	22.1	●² p.
16	58.51	27.1	30.9	23.6	81	Variable	.8	9.6	Ci.-S.	Cu. ENE, NNE	------	
17	58.42	26.9	32.8	23.9	82.6	Variable	1	9.8	Ci.-S. SW	Cu.-N. NNE, ENE	16	● a. ●² d p.
18	59.60	27.2	32.7	23.3	80.3	SE, NNW	1.4	8.8	Ci.-S.	Cu, Cu.-N. ENE	------	
19	59.56	26.8	31.8	23.8	81.7	Variable	.8	10	A.-S.	Cu.-N. NNE	11.7	●² d p.
20	58.72	26.4	31.7	23.7	77.4	W quad.	1	10	A.-S. ESE	Cu.-N. N	------	
21	57.69	26.4	31.8	23.7	79.2	N quad.	1.4	10	A.-S., A.-Cu.	Fr.-N., Fr.-Cu. ENE	4.6	d ●° p.
22	57.06	26.7	31.4	23.9	81.8	N quad.	1.4	10	A.-S.	Cu.-N. NNE	14	d° ● p.
23	56.65	26.6	30	24	85.5	SE quad.	1	10	Ci.-S. ENE	Cu.-N. NNE	------	d° p.
24	57.78	27.7	34	23.6	83	Variable	1.2	7.4	A.-S., Ci.-S.	Cu.-N. ENE	11.2	◟ ⊤ p.
25	59.38	27.8	32.7	24.6	81.4	S quad.	1.2	10	Ci.-S. WSW	N.	.3	●² d a. ○ a. p.
26	59.15	27.7	33.1	24.3	80.6	SE, WSW	1.2	5	Ci.-S.	Cu. ENE	------	
27	59.74	26.8	32.1	24.2	82.4	Variable	1.2	5	Ci.-S.	Variable ENE	5.6	●° p.
28	60.07	27.1	33.6	22.3	78	SW quad.	.8	6	Ci.-S.	Cu. ENE	------	○ a.
29	59.60	26.7	32.7	22.4	77.5	Variable	1	8	Ci.-S. ENE	Fr.-N. ENE	2	●° p.
30	59.37	26.5	33.3	22.9	77	E quad.	1.6	5.4	Ci.-S. ENE	Cu. NNE	------	
31	59.49	26.1	31.9	22.5	80.5	ENE, WSW	1.2	9.2	Ci.-S. SW	N. NE	8.4	d° a. ⊤ ● ◟ p.
Mean	758.37	26.9	32.3	23.5	80.5	----------	1.2	8.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	208.1	

SURIGAO.

[ϕ=9° 48′ N; λ=125° 29′ E; barometer above sea, 6 meters; gravity correction not applied, —1.86 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	757.62	24.4	25.5	23	94.8	Variable	1	10	----------	Fr.-N. E	29.9	d ●° a. ● d° p.
2	55.68	24.5	26.3	22.6	96	NE quad.	2.8	9.8	----------	Fr.-N., N. ENE, NE	83.4	●² a. ● ◟ p.
3	55.40	26.2	27.5	24.5	87.3	E quad.	4.8	9.8	----------	Fr.-N. E	22.1	● ◟ a. ◟² p.
4	58.56	25.9	27.9	23.7	90.8	SE quad.	1.3	9.3	Ci.-S. E	Fr.-N. ESE, SE	3.3	◟² d a. ∞° ◟ p.
5	59.45	26.5	30.4	23.3	88.2	NE quad.	1.5	7	----------	Cu. E	3.6	◟ Ω° a, ∞ p.
6	59.22	24.8	26.1	23.7	92.7	E quad.	1	8	Ci.-S.	Fr.-N. E	3.6	● ⊤ d a. d p.
7	57.75	26	30	22.6	88.8	NE quad.	.8	4.7	Ci.-S.	Cu. E	2.8	◟ Ω² a. ∞ ●° p.
8	57.87	25.6	28.7	22.6	87.8	NW	.5	5.3	Ci. N	Cu. E	------	◟ ≡ a. ∞° p.
9	57.30	25.6	29.1	23.1	92.3	SE	.5	5.7	----------	Cu.-N. E	9.4	◟ Ω² a. ●° ◟² p.
10	57.73	25.7	29.9	23.4	91.5	Variable	.5	6.8	Ci. N	Cu.-N. E	28.9	Ω² a. ●° a. p.
11	58.08	25	26.1	22.3	93.7	NE quad.	1	9.5	----------	N.	31.5	●² a. ●° d° p.
12	57.84	24.9	26	23.7	93.8	E	1.5	10	----------	Cu.-N.	30.8	● a. p. ◸ d p.
13	57.44	25.7	29.9	23.9	91.2	NE quad.	2.2	9.3	A.-Cu. NE	Fr.-N. E	15.7	d a. ● a. p.
14	57.32	25.3	29.2	22.8	92.3	NE quad.	1.2	10	Ci.-S., A.-Cu. E	Cu.-N.	11.4	Ω d° a. ●° p.
15	57.71	24.5	26.2	23.4	95.3	SE quad.	.7	9.5	A.-Cu.	Fr.-N. E	92.4	d a. ●² d p.
16	58.47	24.7	27.6	22.5	92.8	SE quad.	.8	10	Ci.-S.	Fr.-N. ENE	------	●° d a. Ω° p.
17	58.16	24.9	27.6	23	92.2	N quad.	1	8.8	Ci.-S. E	Cu.-N.	195	Ω° ≡ a. ●² p.
18	59.07	25.5	29.4	22.6	89.3	NE quad.	1	9.3	A.-Cu. E	Cu.-N. E	2	●² d a.
19	59.16	25.6	28	23.6	89.8	NE quad.	2	8.5	A.-Cu. E	Cu.-N. SE	11.2	Ω° ≡ a. ●° p.
20	58.38	25.7	26.9	22.9	82.8	NNW	2.8	10	Ci.-S.	Cu.-N. E	------	d° p.
21	56.93	24.9	27.3	23	87.2	SW quad.	1.8	10	A -Cu.	Fr.-N. W, NW	9.6	d° ●° p.
22	56.13	25.9	30	23.1	85.8	SW quad.	2	9	Ci.-S. NW	Fr.-N. W, WSW	2.3	●° d a. d° p.
23	56.22	26	29.5	24.1	90.3	S	.8	8	Ci.-S.	Cu.-N. W, E	9.4	d a. p.
24	57.49	27.1	30.6	23.5	86.3	E, ENE	1.2	4.3	Ci., Ci.-S. NE	Cu. E	------	Ω° a. ∞ p.
25	59	27.5	30.9	24.4	86.5	NE quad.	1.3	4.7	Ci. NE	Cu. E	------	d° ◟ a. ◟ p.
26	59.06	27.1	30.7	23.7	84.8	ENE	1.2	4	Ci. NE	Cu. E	------	◟° Ω° a. ∞ d p.
27	59.82	27	30.3	24	85.7	NE	1.7	5.5	----------	Cu.-N. E	8.6	Ω° ●° a. ● ◟ p.
28	60.22	27.1	30.7	23.4	83.3	NE quad.	2	4.7	Ci. NE	Cu. E	1.5	◟° a. ∞ p.
29	59.35	26.8	29.4	24.7	84	NE	3.2	6.3	Ci.-S. NE	Cu.-N. E	1.5	●° a. p.
30	59.14	25.3	28.9	22.5	89.3	Variable	1.7	5.5	A.-Cu. SE	Cu.-N. E	33.3	Ω² a. ● d° p.
31	58.95	26.5	28	24.8	84	NE	3.3	9	Ci.-S.	Fr.-N. ENE	9.2	●° a. p.
Mean	758.08	25.7	28.5	23.4	89.4	----------	1.6	7.8	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	652.4	

[1] All the mean values given in these tables are deduced from six daily observations.
[2] Deduced from five observations only.

METEOROLOGICAL DATA, ETC.—Continued.

CEBU.

[ϕ=10° 18′ N; λ=123° 54′ E; barometer above sea, 4.5 meters; gravity correction not applied, —1.84 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.57	25.8	27.9	23.4	83.3	NE	4.8	7.8	Ci.-S.	Cu.-N. NE	0.3	≡° ●° a.
2	56.45	26.2	30.8	22.9	78.5	N quad.	10.4	8.3	Ci.-S.	Cu.-N. NE	29	≡° Ω a. ● p.
3	55.10	26.3	28.4	22.1	82.2	NE quad.	24.1	8.3	A.-Cu. SE	Cu.-N. E quad.	.8	● a.
4	58.45	26.8	29.5	24.8	80.2	E quad.	9.5	6.7	Ci.-S.	Cu.-N. ESE	-------	≡° Ω a.
5	59.52	27.2	30.2	24.7	76.8	NE quad.	8.6	4.2	Ci.	Cu., Cu.-N. E	21.3	≡° Ω a. ∞ p.
6	59.13	25.6	29.5	23	82.2	NE quad.	8.1	6.7	Ci.-S.	Cu., Cu.-N. NE	-------	≡° ●a.
7	58	25.6	29.7	23.1	81.5	NE quad.	7.4	7	Ci., Ci.-S.	Cu.-N. NE	7.2	≡° a. ⌐◹ p. ● a.p.
8	57.79	25.8	29.6	22	76	ENE	8.8	2.8	Ci.	Cu. NE	-------	Ω a. p.
9	57.17	26.8	30.3	23.3	75.5	NE quad.	10.8	2.8	Ci.	Cu., S.-Cu. ENE	.8	Ω a. ◟ p.
10	57.64	26.8	30.4	23.8	79.2	NE quad.	9.3	3.5	Variable	Cu. ENE	-------	●° a. ◟ p.
11	57.90	26.6	30.2	23.9	78.1	NE quad.	10.8	5.5	A.-Cu. E	cu.,cu.-N.NE quad.	7.7	≡° Ω a. ☋ ● p.
12	57.86	25.9	29.5	22.9	82	NE quad.	7.8	7	Ci.-S., A.-Cu.	Cu.-N. NE quad.	1.5	● a. p. ☋ p.
13	57.31	26.3	29.9	23.5	79.5	NE quad.	7.3	6.7	Ci.-S.	Cu. ENE	-------	Ω a. ∪ p.
14	57.20	26.9	30	24	78.5	NE quad.	7.6	6.5	A.-Cu. E	Cu. NE	-------	≡° Ω a. d° ◟ p.
15	57.66	26.6	29.5	24.7	81.1	NE	7.6	7.3	A.-Cu. E	Cu., Cu.-N. NE	-------	Ω a. ☋ p.
16	58.47	26	30.2	22.6	79.8	ENE, SE	4.2	5.8	Ci.-S., A.-Cu.	Cu. NE	-------	≡° Ω a. ☋ p.
17	58.17	26.1	29.7	22.4	79.1	ENE, NE	9.6	4.8	Variable	Cu. NE	20.1	≡° Ω a. ◟ ☋ p.
18	58.94	26.2	30	22.5	80.2	NE quad.	8.8	7.8	A.-Cu.	Cu., Cu.-N. NE	3	≡° ●a. ●° p.
19	58.89	26.2	29.6	23	79	NE quad.	10	5	Ci., Ci.-S.	Cu. NE	-------	≡° Ω² a.
20	58.51	25.9	28.6	24.1	74.3	NE	6.9	8.3	Ci.-S.	Cu. NE	-------	Ω ☋ a.
21	57.19	25.4	29	22	77.5	E quad.	5.3	8.8	A.-Cu. E	Cu.-N. N quad.	10.7	Ω a. ● p.
22	56.30	25	29	22.2	89.7	SE, S	4.6	7.3	A.-Cu.	Cu.-N. N	3	Ω² ∪ a. ● d² p.
23	56.37	25.1	27.5	24	92	SW quad.	5.1	7.7	A.-Cu.	Cu.-N. Variable	26.7	● a. p. ◟ p.
24	57.35	26.8	29.9	24.2	80.3	Variable	-------	4.3	Ci.	cu.,cu.-N.SE quad.	-------	d² a. ◟ p.
25	58.84	26.6	29.5	24.2	82.2	NE	6.2	5.3	Ci.-S.	Cu., Cu.-N. ENE	6.6	● a. Ω a. p.
26	59.01	26.9	30	24.5	79.3	NE quad.	8.4	2.7	Ci.	Cu. E	-------	Ω a. p.
27	59.78	26.8	30	24.5	77.6	ENE	9.7	3.5	Ci., A.-Cu.	Cu. NE	.3	Ω a. ●° p.
28	60.33	26.6	30	23.9	74	NE, ENE	9.9	3	Ci.	Cu. ENE	-------	Ω a. p.
29	59.47	26	29.5	23.8	80.1	ENE, NE	9.5	5.5	Ci., Ci.-S.	Cu. ENE	.3	Ω a. ●° p.
30	59.12	25	29	23	83.8	NE	7.8	6	Ci.-S., A.-Cu.	N.-cf., S.-Cu. NE	1.8	● d a.
31	59.04	25.9	28.6	22.8	76.8	NE quad.	8.8	6.7	Ci., Ci.-S.	Cu., Cu.-N. ENE	5.6	≡° Ω a. ●° p.
Mean	758.08	26.2	29.5	23.4	80	----------	8.6	5.9	----------	----------	-------	
Total	-------	------	------	------	-------	----------	-------	-------	----------	----------	146.7	

ILOILO.

[ϕ=10° 42′ N; λ=122° 34′ E; barometer above sea, 6 meters; gravity correction not applied, —1.84 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758	26	29	23.9	83.5	NE, N	11.7	7	Ci.	Cu. NE	-------	● ≡° a.
2	57.05	26.8	30.5	24.5	80.7	N	16.1	6.8	Ci.-S.	Cu. NE	21.8	Ω a. d ● p.
3	54.95	25.4	27.5	23.4	88.7	NE	20.3	9.8	Ci.-S.	Cu. NE	24.9	● a. p. ◟ p.
4	58.06	27.2	31.6	23.4	79.2	NE	8.4	7.5	Ci.-S.	Cu. SE	-------	≡° a. ◟ p.
5	59.57	27.4	31	24.4	78.2	NE	12.5	3.3	Ci.	Cu. E	1.8	Ω a.
6	59.34	26.6	30.5	24	80.3	NE, N	13.1	7.8	A.-Cu. E	Cu.	-------	● a.
7	58.34	25	29.4	22.5	88.3	N	10.5	8.2	A.-Cu. E	N. NE	27.2	● a. p.
8	58.18	25.9	30.1	22.5	82.3	NE quad.	12.7	5.7	Ci.	Cu. NE	-------	
9	57.68	25.7	29.6	23	85.8	N	11.9	6.8	A.-Cu.	Cu. N	1.6	d a. ● ◟ p.
10	57.91	27.1	31.1	24.3	80	NE	12.2	6.5	Ci.	Cu. NE	-------	◟ ⊤ d p.
11	58.20	26.7	31.1	24.3	81.8	NE quad.	14.4	6.5	A.-Cu.	Cu. ENE	1.8	d a. ● p.
12	58.05	26.1	30.5	24.1	83.6	N, NE	1.2	9	A.-Cu. E	Cu.	9.9	● a. ◟ ☋ p.
13	57.45	26.8	31	23.4	81.8	NE quad.	12.8	8.5	Ci.-S.	Cu. NE	-------	● d a.
14	57.44	26.7	31.4	24.3	81.8	N	11.9	7.5	A.-Cu.	Cu.	-------	Ω² ≡° a. ◟ ●° ☋ p.
15	57.78	26.1	31	23.8	85.7	NE	10.2	7.3	A.-Cu. E	Cu.-N. E	.3	Ω a. ⊤ ●° p.
16	58.58	26.5	30.9	23.4	78.2	NE quad.	11.4	6	Ci.	Cu.	-------	Ω ≡° a. ☋ p.
17	58.43	26.1	30.1	22.8	80.4	NE	14.5	7.8	Ci.	Cu.	.5	Ω a.
18	59.18	25.6	29.5	22.9	81.3	N	17.3	7.7	A.-Cu.	Cu. NE, E	-------	● ≡° a. d p.
19	59.28	26	30.5	23.5	79.1	NE quad.	14.2	6.3	A.-Cu. E	Cu. NE	-------	Ω° ≡° a.
20	59.10	25.3	29.5	22.9	78.3	NE quad.	14.7	8.7	Ci.-S.	Cu.	-------	Ω ≡° a.
21	57.93	25.6	30.4	23.5	77.5	NE	9.5	10	A.-Cu. ENE	Cu.	.8	≡° a. ● p.
22	57.10	25.4	29.1	22.4	84.3	NE, N	10.3	9.8	A.-Cu.	Cu. NNW, N	.5	●° a p.
23	56.68	25.9	31	23.7	86.3	NE quad.	6.9	7.8	Ci.-S. E	Cu. N	35.9	Ω d. a. d ● ◟ p.
24	57.54	25.9	30.5	24.4	90.7	NE quad.	10	8	A.-Cu.	Cu.	15.3	⌐◹ a. ◟ p. ● ⊤
25	58.98	26.6	31.1	24.4	86.5	N	11.8	7.3	Ci.-S., A.-Cu.	Cu. NE	.3	≡° a. d° p.
26	59.05	27.3	31	24.5	81.2	NE quad.	10.4	6.3	Ci., Ci.-S.	Cu.	1.3	≡° ● a. ◟ ⊤ p.
27	59.93	26.7	31.1	24.4	81.3	N	14.1	3.8	Ci.	Cu.	.3	Ω² ≡° a. ● d p.
28	60.56	26.6	31.4	23.7	78.5	N	14.8	4.3	Ci.-S.	Cu. NE	.3	d ◹ ● p.
29	59.77	25.5	29.5	23.2	81.6	NE	17.7	7.7	A.-Cu. E	Cu.-N. NE	6.3	◠ a. ● a. p. d p.
30	59.82	24.8	28.4	21.9	81.8	NE	15.6	8.2	A.-Cu.	Cu. N	-------	● ≡° a. d p.
31	59.43	25.4	29.5	22.9	82	N, NE	15	5.5	A.-Cu. E	Cu. NE	1.1	≡° a. ● a. p. ◟ p.
Mean	758.37	26.2	30.3	23.6	82.3	----------	12.9	7.2	----------	----------	-------	
Total	-------	------	------	------	-------	----------	-------	-------	----------	----------	151.9	

METEOROLOGICAL DATA, ETC.—Continued.

ORMOC.

[$\phi = 11°\ 00'$ N; $\lambda = 124°\ 36'$ E; barometer above sea, 5.6 meters; gravity correction not applied, —1.88 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°C.	°C.	°C.	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	757.79	------	------	------	------	N	4.4	6.7	Ci.-S.	Cu.-N. EbyN	------	≡° a.
2	56.79	------	------	------	------	NE	10.3	8.8	Ci.-S. E	Cu.-N. NEbyE	37.6	≡° a. ● p.
3	55.70	------	------	------	------	SE	13.9	10	Ci.-S.	Cu.-N. E	9.6	≡° a. d a. p ≤ p.
4	58.55	------	------	------	------	SE, E	8.6	10	Ci.-S.	Cu.-N. SE	8.3	d a. p. ≡°● p.
5	59.62	------	------	------	------	E quad.	6.1	4.7	Ci.	Cu. E	------	≡° a. ≤ p.
6	59.25	------	------	------	------	E quad.	5.4	8.2	Ci.-S.	Cu.-N. E	1.3	≡° d a.
7	58.22	------	------	------	------	SW quad.	3.5	8.5	Ci.-S.	Cu.-N. E	30.8	≡² ● a. p.
8	58.10	------	------	------	------	N quad.	5.3	5.8	Ci.	Cu.-N. E	------	p a. ☋ p.
9	57.54	------	------	------	------	NE quad.	4.6	6	Ci., Ci.-S.	Cu.-N. EbyN	6.8	≡° a. ⊤ d ≤ ⌣ p.
10	57.90	------	------	------	------	N	6	7.3	Ci.-S.	Cu.-N. E	6.1	☊ a. p ☈ ≤ p.
11	58.22	------	------	------	------	N quad.	4.6	9.2	Ci.-S.	Cu.-N.	4.6	☊ a. d ≤ p.
12	57.97	25	30.4	22	86.7	N quad.	5.3	9.3	Ci.-S.	Cu.-N.	3.9	≡° a. d ⌣ p.
13	57.56	25.4	29.4	22.8	88.2	NE	4.8	8.8	Ci.-S.	Cu.-N. E	1.8	☊ ≡° d a. ◠ d p.
14	57.34	25.5	30.1	22.5	88.7	N quad.	4.2	8.8	Ci.-S.	Cu.-N.	12	≡° a. d ≤ p.
15	57.75	25.1	28.9	22.8	88.4	N quad.	3.8	9.8	Ci.-S. E	Cu.-N.	3.1	d a. p.
16	58.43	25.2	30.2	21.8	85	N	4.8	8	A.-Cu. E	Cu.-N.	------	☊ ≡° a. ☋ p.
17	58.32	24.9	30	22.2	87.1	N quad.	4.3	9.2	Ci.-S.	Cu.-N. NEbyE	9.1	☊ ≡° ☈ ● a. d p.
18	59.10	25.5	30	22.4	82.5	N quad.	6.7	9.7	A.-Cu. E	Cu.-N. E	------	≡° a.
19	59.02	25.3	31.5	21.3	81.3	N, NE	4.1	8.2	Ci.-S.	Cu.-N.	.5	☊ ≡° a. p p.
20	58.65	24.4	27.3	21.6	88.8	N quad.	3.4	10	Ci.-S.	Cu.-N.	.3	≡° a. d° p.
21	57.35	23.9	26.7	21.5	88.5	N quad.	4.5	10	Ci.-S.	Cu.-N. NW	15.3	≡° d a. ● p.
22	56.11	24.5	26.5	22.7	95	N quad.	6.8	10	Ci.-S.	Cu.-N. NWbyW	5.9	≡° a. d ≤ p.
23	56.48	25.1	28	23.4	94.8	Variable	6.1	8	Ci. E	Cu.-N. SE	5.9	≡° ⊤ a. ≡ d ≤ p.
24	57.54	26.1	30.5	22.9	83.8	NE quad.	6.3	6.2	Ci.-S. NbyE	Cu.-N.	.5	☊ ≡° a. p ≤ p.
25	58.99	25.8	31.6	22.8	84.2	N	5.5	6.5	Ci. E	Cu.-N.	.3	≡° p° a. ≤ p.
26	59.23	25.7	31	21.4	83.2	NE	7.2	5.5	Ci.	Cu.-N. E	------	≡° a.
27	59.97	25.1	29.5	22	88.5	N quad.	5.6	6.2	Ci.-S.	Cu.-N. E	3.4	☊ a. p p.
28	60.47	25.5	31.3	20.8	80.8	N	6.4	4.8	Ci.	Cu.-N. ENE	------	☊ ≡° a.
29	59.61	25.3	29.6	22.7	81.8	NW	6.2	8.7	Ci.-S.	Cu.-N. NE quad.	20.8	≡° a. d p.
30	59.48	24.4	28	22.9	87.4	NW	6.7	8.8	Ci.-S.	Cu.-N.	3.3	● a. ☈ p.
31	59.32	25.6	29	22.2	77.5	NE quad.	7.3	9	Ci.-S.	Cu.-N. ENE	.3	≡° a. p p.
Mean	758.27	25.2	29.5	22.2	85.9	----------	5.9	8.1	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	191.5	

TACLOBAN.

[$\phi = 11°\ 15'$ N; $\lambda = 125°\ 00'$ E; barometer above sea, 5.5 meters; gravity correction not applied, —1.82 mm.]

	mm.	°C.	°C.	°C.	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	758.84	26.7	31.5	24.2	84.3	NW quad.	0.5	9	Ci.,Ci.-S. SW	Cu. E	------	d a. ◯².
2	58.06	26.2	31.5	22.5	82.5	Variable	1.5	8.3	Ci. SW	Cu. NE	69.4	◯² a. p.●² p.
3	57.40	25.4	27.5	22.8	87.3	E quad.	1.5	10	----------	N. E quad.	42.3	●² a. ● p.
4	59.72	26.2	28.5	23.5	88.5	SSE	.7	8.8	----------	Cu.-N. ESE	5.3	●² a. ●° p.
5	60.74	27	32.5	23.4	82.4	ESE	.5	2.5	----------	Cu. E	2.8	● p.
6	60.54	25.6	29.8	24	88.7	NW	.5	5.2	Ci.-Cu. SW	Cu.-N., Cu. ENE	8.2	● ☈ a. p.
7	59.06	25.1	29.2	22.9	92.3	NW quad.	.8	8	----------	Cu.-N. E	10.6	● a.
8	59.07	25	30.3	22.4	90.5	NW quad.	1	4.7	Ci.-S. SW	Cu.-N. NE	3.8	☊² ≡ a. ● p.
9	58.51	25.5	31.1	22.8	91.7	NNW, NW	.8	5	Ci.	Cu. ENE	21.4	☊² a. ●² ⌒° ☈ ☒² p.
10	59.10	26	32	23.6	90.2	NW quad.	.7	6.5	Ci.-S. SW	Cu.-N. ENE	10.6	● ⊤ p.
11	59.33	25.3	29.5	23.5	91.2	ENE, N	1	6.7	Ci.-S. SW	Cu., N. NE	4.3	d ● p.
12	59.05	25.4	30.3	23.3	90	E quad.	.8	7.7	Ci.-S. S, SSW	N. ENE	17.1	◠ a. ● a. p.
13	58.67	25.5	29.5	23.3	90.7	NW, SSW	.3	8.3	Ci.-S. SSW	Cu., N. ENE	8.1	● a. p. ◠ ⌣° p.
14	58.27	26.3	31.5	23.8	84.7	WNW	.3	8.2	Ci.-S. SSW	Cu. ENE	6.6	● p.
15	58.85	25.4	30	24	93.2	NW quad.	.2	9	Ci.-S.	Cu.-N. NEbyE	5.4	◠² a. ● a. p.
16	59.29	25.7	29.2	23.7	90.3	NW quad.	.5	8.2	Ci.-S. SSW	N.-cf. ENE	1.8	● p.
17	59.38	25	28.7	23.6	93.2	NW quad.	1	9.3	Ci.-Cu.	N. NE	15.8	☋² a. ● a. p.
18	60.39	25.3	29	23.6	89	N	1	8.5	Ci.	Cu.-N ENE	.5	d a. p.
19	60.28	25.4	29.8	24	87.5	N	.7	8.5	Ci.-Cu.	Cu.-N NE	2.3	● a. p.
20	59.81	25	26.7	23.4	84	NW quad.	1.5	9.5	Ci.	Cu.-N. NE	------	d p.
21	57.72	25.3	28.5	23.3	85.2	NW	1.8	9.2	Ci., Ci.-Cu.	N. N	13.5	⌣² ☋² a. d ● p.
22	56.62	24.7	29	23	92.8	NW, WNW	1.2	8.7	----------	N. NW	65	● a. ☈ ●² p.
23	57	26.1	31.5	23	89.5	S	.3	7.8	Ci.-S. SW	Cu.-N. ENE	17.9	● ⊤ p.
24	58.74	27.1	31.4	24.6	87.5	SE quad.	.8	7.5	Ci.-S. SW	Cu.,Cu.-N. E	------	● ◠ a.
25	60.04	26.8	30.7	24.2	86.7	W quad.	.7	5.3	Ci. SW	Cu. ESE	------	☊² a.
26	60.33	26.8	31.4	23.7	87	W, S	.8	3.8	Ci.-S.	Cu. ESE	1.8	☊² ⊕² a. ● p.
27	61.07	26.4	31	23.8	87.7	SE	.7	5.7	Ci.-S.	N. ENE	2.1	☊° d ● ◠² a.
28	61.58	27	32	23.6	82.7	NW, N	.7	5	Ci.-S. SSW	Cu. E	4.1	☊² a. ● p.
29	61.03	25.5	28	23.5	85.3	NE quad.	1.2	8.5	----------	Cu.-N., N. ENE	50.8	● a. p.
30	60.71	24.2	26.5	22.8	91.5	NE quad.	1.5	9.2	----------	N. NNE	24.2	●² a. d p.
31	60.48	25.5	30.5	22.6	86.5	NE quad.	.5	7.7	Ci.-Cu.	Cu.-N. E	------	d° p.
Mean	759.34	25.8	30.0	23.4	88.2	----------	.8	7.4	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	415.7	

METEOROLOGICAL DATA, ETC.—Continued.

CAPIZ.

[ϕ=11° 35′ N; λ=122° 45′ E; barometer above sea, 6 meters; gravity correction not applied, —1.81 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.				Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.				
									Upper.		Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*					*mm.*	
1	758.34	27	------	24.8	84.5	NE quad.	1.7	5.5	Ci.-Cu.	NE	Cu.	NE	------	
2	57.82	27.3	------	24.5	81.2	NE quad.	2.3	9.3	Ci.-S.		N.	NE	35.2	●° ↙ p.
3	56.09	25.4	------	23.3	89.7	NE quad.	4.2	9.8	Ci.-S.	NE	Fr.-N.	ENE	8.2	↙° ● a. ↙ ●° p.
4	58.44	27.6	------	25.4	84.2	SE quad.	1.7	8.3	Ci.-S.	E	N., Cu.	SE	.6	●° a. p. ↙ p.
5	59.93	27.4	------	25.2	82.8	E	1.7	5.2	Ci.		N.-cf., Cu.	E	------	●° a. ↙ p.
6	59.79	26.9	------	25.2	84.5	NE quad.	1.3	4.7	Ci.-S.	E	Cu.	NE	.5	⊽ p.
7	58.60	25.9	------	22.5	87.5	Variable	2.2	9.2	Ci.-S.		N.	NE	2.5	●° a. p.
8	58.63	25.6	------	22.4	87	NNE	1.3	6	Ci.	ENE	Cu.	NE	------	☊² d° a. ⊽ p.
9	58.24	26	------	24.8	88.8	N	1.8	8.7	Ci.-S.		N.	N	5.4	●° a. p. ↙ ⊽ p.
10	58.32	27	------	25.2	87.5	NE quad.	2	8.3	Ci.-S.	NE	Fr.-N., N.-cf.	E	2.5	d° a. ●° ◪ p.
11	59.01	26.3	------	25.3	88.3	NE	1.8	6	Ci.-S.		Cu., N.	E	3.8	● p.
12	58.73	26.7	------	25.2	88.3	NE quad.	1.5	6	Ci.-S.		Cu., N.	NE	4.1	●° ┬° p.
13	57.85	26.6	30.6	24.2	86.2	NE quad.	1.3	6.2	Ci.		Cu.	NE	------	● a.
14	57.66	26.5	30.8	24.7	86	NNE	1.3	7.3	Ci.		Cu.	NE	1.3	◪ ●° ↙ p.
15	58.08	26.8	30.2	23.7	89	NE quad.	1.2	8.7	Ci.-S.	NE	N.	E	11.3	●° a. p.
16	59	26.2	30.3	22.9	85.2	Variable	1.2	6.3	Ci.		Cu.	NE, SE	------	☊ a. ⊽ ↙° p.
17	59.09	25.5	29.1	23.7	88.2	NE quad.	2.3	9	Ci.-S.		N.	NE	6.1?	●° a. p.
18	60.06	25.6	29	24	80.7	NE	1.7	9.7	Ci.-S.	NE	N.	NE	4.7	●° a. p.
19	59.98	26.2	30	24.7	80.6	NE	2.2	9.2	Ci.	NE	N.	NE	.5	d ●° p.
20	59.71	26.2	29.8	24.8	75.8	NE	1.8	10	Ci.-S.		N.	NE	.5	●° p.
21	58.14	26.3	29.2	22.9	79.3	NW	2	9.8	Ci.-S.	W, E	N.	N, NW	6.3	d° a. ↙° ● p.
22	57.40	25.2	27.8	23.4	89.8	NW quad.	2.7	9.8	Ci.-S.		N.	NNW, N	2.1	●° d° a. p. ↙ p.
23	56.96	26.4	30.3	23.5	89	N	2.3	9.2	Ci.	SE	N.	N	10	⊽ a. ⊕° ☾° p. ↙ ●°
24	58.22	25.7	28.3	24.5	93	NE quad.	2.7	9.7	Ci.-S.		N.	NE	6.4	↙° ●° a. ↙ p.
25	59.65	26.7	29.4	25.4	87.8	NE	1.8	7.8	Ci.-S.		N.	NE	------	
26	59.55	27.4	31.2	25.5	86	NE quad.	1.5	4.8	Ci.		Cu.	NE quad.	------	◪° p.
27	60.61	26.6	30.8	24.4	86.8	NE	2	5.7	Ci.		N.	NE	6.9	⊽° a. ◪ ● p. ↙
28	61.27	26	30.1	23.8	86.6	NNE	2.5	6.7	Ci.-Cu.	NE	Cu., N.	NE	9.6	⊽° a. ☾² ● ↙ p.
29	60.98	25.4	28.5	23.3	82.7	NE	3.3	9.5	Ci.-S.	NE	N.	NE	6.9	↙° a. ●° a. p.
30	61.16	24.2	26.9	22.8	89.3	N quad.	1.5	8	Ci.-S.	NE	N.	NE	10.2	●° d a. p.
31	60.33	25.3	29.6	23.3	86.2	NE	2.2	9.5	Ci.-S.	NE	N.	NE	1.3	●° a. p. ↙ p.
Mean	758.96	26.3	29.6	24.2	85.9	------	2	7.9	------		------		------	
Total	------	------	------	------	------	------	------	------	------		------		147	

CALBAYOG.

[ϕ=12° 04′ N; λ=124° 36′ E; barometer above sea, 4.1 meters; gravity correction not applied, —1.80 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*					*mm.*	
1	758.50	26.1	32.1	22.2	85.1	NE quad.	1.2	6.2	Ci.-S.	SE	S.-Cu.	NEbyE	2.3	☊ a. d° p.
2	57.75	26.6	32.1	22.9	85.7	NE quad.	1.7	8.3	Ci.-S.	ENE	S.-Cu.	NE	49.9	d° a. d ● p.
3	57.21	24.4	26.1	22.9	91.6	E quad.	1.5	9	A.-Cu.		N.	E	15.1	● a. p. d p.
4	59.42	25.8	29.8	22.9	88.5	E quad.	1	7.3	A.-Cu.		S.-Cu.	SE	------	d a.
5	60.40	26.2	32.8	22.2	86.2	NE quad.	1.2	2.2	Ci.		S.-Cu.	E	2.1	☊² ≡° a. ● p.
6	60.12	25.9	30.7	22.5	88.3	NE	1.2	6.2	A.-Cu.	SE	S.-Cu.	ENE	1.3	d° a.
7	58.76	25	29.6	22.2	91.3	NE	1.2	6.7	Ci.-S.		N.	ENE, E	8.1	d° a. p. ● p.
8	58.62	25.6	31.8	20.9	84.7	NE	1	4	A.-Cu.	E	S.-Cu.	NE	------	☊² ≡ a. d ∪ p.
9	58.24	25.6	31.3	23	90.7	NE	.7	5.8	Ci.-S.		S.-Cu., N.	NE	23.1	☊² a. ● ┬° ↙ p.
10	58.73	25.8	30.7	22.5	90.5	N quad.	1	5.5	Ci.-S.		S.-Cu.	E	10.7	● ┬° ◪ ⊽ ↙ p.
11	58.96	24.9	31.2	22.3	90.3	NE quad.	1.2	6.7	Ci.-S.		S.-Cu.	NE	9.9	p° a. ●° ∪ p.
12	58.54	26.1	30.7	23.4	86.7	NE quad.	1.2	6.5	Ci.-S.		S.-Cu.	ENE	13	d° a. p. ∪ p.
13	58.08	25.7	30.3	22.6	89.8	NE quad.	1	6.8	Ci.-S.	SE	S.-Cu.	E	6.9	● a. p. p° ⊽ ∪ p.
14	57.96	25.4	31.7	22.7	89.8	NE	1	8.3	Ci.-S.	SE	S.-Cu.	E	5.1	d° a. ●° ┬ d p.
15	58.36	26	31.1	23	86.2	NE quad.	1	7.8	Ci.-S.		S.-Cu.	ENE, NE	------	∪ ⊽ p.
16	58.92	25.3	32.1	20.9	88.4	NE	1.2	5.7	Ci.	SE	S.-Cu.	NE	2	☊² ≡ a. d° ⊽ p.
17	59.03	24.8	28.8	22.4	89	NE quad.	1.3	7.7	A.-Cu.		S.-Cu.	NE	8.7	⊽ ☊ ●° a. ∞ d°p.
18	60.06	25.2	28.6	22.7	85.7	NE	1.5	6.8	A.-Cu.	E	S.-Cu.	ENE	.3	d a. ⊽ a. p.
19	60.03	25	31	22.2	86.8	NE	1.3	5.8	Ci.-S.		S.-Cu.	NE	.3	⊽ a. d a. p.
20	59.65	24	28.7	20.1	88.2	NE	1	9.3	Ci.-S.		S.-Cu.	NE	------	∪ ≡ a.
21	57.44	24.6	27.6	22.5	91.2	NW	1	10	A.-Cu.		N.	NW	42.7	d° a. ● p.
22	56.12	25.3	29.1	23.1	93.3	N	1.2	9.8	Ci.-S.		N.	N	5.4	●° a. ┬ d ↙ p.
23	56.57	26.9	31.5	23.5	87.8	NE	1.2	7.7	Ci.-S.	NW	S.-Cu.	NE	.8	d° a. ┬ ↙ p.
24	58.22	26.2	30.5	23.2	89.5	NE	1.3	6.8	Ci.-S.		S.-Cu.	E	3.8	d² ● ↙ p.
25	59.69	26.2	30.3	23.7	88.3	NNE	1	4.3	Ci.-S.	SSE	S.-Cu.	E	------	┬ ◪ ↙² p.
26	59.90	25.7	31.7	22.2	88.5	N	1.3	3.3	Ci.		Cu.	E	39.9	☊² a. p² ┬° p.
27	60.78	25.3	30	22.2	89.3	NNE	1.3	3.3	Ci.-S.	SE	S.-Cu.	NE, ENE	2.3	☊ a. d° p.
28	61.36	24.4	31.2	21.8	90.5	N quad.	1.2	5.8	Ci.-S.		N.	ENE	13.5	☊ a. ● p.
29	60.90	24.4	29.7	21.8	90.3	N quad.	1.3	8.3	Ci.-S.		S.-Cu.	NE	2.1	d° a. p.
30	60.50	23.4	25.7	21.9	93.7	NE	1.3	9.7	A.-Cu.		N., S.-Cu.	NE	15.3	d a. ●° a. p.
31	60.21	24.4	29.6	21.6	91	NE quad.	1.3	8.2	Ci.-S.		S.-Cu.	NE	3.1	●° a. d p.
Mean	759	25.4	30.3	22.4	88.9	------	1.2	6.8	------		------		------	
Total	------	------	------	------	------	------	------	------	------		------		287.7	

METEOROLOGICAL DATA, ETC.—Continued.

LEGASPI.

[ϕ=13° 09′ N; λ=123° 45′ E; barometer above sea, 4.2 meters; gravity correction not applied, —1.77 mm.]

Day.	Pressure (mean).	Temperature. Mean.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity (mean).	Wind. Prevailing direction.	Wind. Force (mean).	Clouds. Amount (mean).	Clouds. Prevailing form and its direction. Upper.	Clouds. Prevailing form and its direction. Lower.	Rain, 24 hours beginning 6 a. m.	Miscellaneous.
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	758.80	26.3	30.6	23.9	87.7	NE	12.9	8.3	Ci.-S. S	Cu. NE	16.3	● p.
2	58.36	26.6	30	22.6	85.3	NE	16.6	9	Ci.-S.	Cu.-N., N. ENE, NE	39.5	● a. p.
3	58.05	25.3	27	22	87.8	E quad.	27.5	10	Ci.-S.	Fr.-N. ENE	44.3	● a. p.
4	59.55	26.2	29.5	23.4	89.3	E	14.5	9.5	Ci.-S.	Cu.-N., Fr.-N. SE quad.	59	● a. p.
5	60.55	27.1	30.2	23.5	83	E quad.	13.7	5.7	Ci.	Cu. ENE	14	● a. ◠ a. ● p.
6	60.22	26.8	30.3	23.7	86.3	NE, E	11.4	5.3	Ci.-Cu., Ci.	Fr.-N., Cu.-N. ENE	9.1	● a. p.
7	58.83	27	29.9	24.6	83	NE, ENE	14.6	2.8	Ci., A.-Cu.	Fr.-N., Cu. ENE	2.3	● a.
8	58.57	26.6	30.6	22	82.7	NE	9.4	4.3	Ci. S	Cu. N	5.6	● p.
9	58.27	26.2	29.9	23.5	88.6	NE, NNE	14.9	7.5	Ci.-S.	Cu.-N. NE	42.2	● a. p.
10	58.83	25.9	29.5	23.4	91.2	NE	9	6.2	Ci.-S.	N., Fr.-N. ESE, SE	6.8	● a.
11	59.09	26.7	30.1	24.5	87.2	NE quad.	12.9	5.5	Ci.-S.	Cu.-N. ENE, NE	3.3	● a. d p.
12	58.75	26.8	29	23.9	84.8	NE	13.1	7.3	Ci.-S.	Cu., Cu.-N. NE. ENE	23.1	● a. p.
13	58.27	27	30	23.5	87.3	E quad.	11.3	3.8	Ci.	Cu.-N. ENE	6.6	● a. p.
14	58.11	26.8	30.8	24.5	87	NE quad.	10.8	6.5	Ci. SE	Cu. NE	14.5	≡° a. ●° ◡° p.
15	58.53	25.5	27.9	23.1	91.2	ENE, NE	5.8	8.2	A.-Cu. SSE	N. NE	36.6	● a. p.
16	58.93	26.6	31	23.1	85.5	E quad	7.8	5.5	A.-Cu. N	Cu. NE	61.2	≡ a.
17	59.06	25.4	27.8	22.4	89	NE	16.4	9.8	Ci.-S.	Fr.-N. NE, ENE	21.4	● a. p.
18	60.08	25.9	30	24.5	81.8	NE	16.6	3.8	Ci.-S., Ci.	Cu. NE, ENE	------	d° a. p.
19	60.08	26.2	29.9	23.5	82	NE	15.3	4.3	Ci.	Cu.-N. NE	.5	◠ ●° p.
20	59.80	26	29.1	21.8	80.2	NE	11.3	8.7	Ci.-S. SSE	Cu.	.5	
21	57.88	25.1	28.7	22	88.2	NE	13.1	9.2	Ci.-S.	N. NE, N	41.1	d a. ● p.
22	56.62	24.9	26.7	23.4	93.7	NE	17.5	10	Ci.-S.	N., Fr.-N. NE	4.3	● a. d² ≮ p.
23	56.92	25.8	27.6	24	92.3	NE	15	9.5	Ci.-S.	Fr.-N. S. NNE	43	● ≮ a. ● p.
24	58.61	24.9	26.3	23.2	96.1	NE	18.1	10	Ci.-S.	N., Fr.-N. NE	47	● a. p. ⏐ p.
25	59.68	25.4	28.2	23.1	96.2	NE	5.9	7.2	Ci.-S.	Fr.-N. E quad.	16.1	● a. p.
26	59.96	26	30	22.1	91.2	NE	7.2	4.5	Ci.-S., Ci.	Cu.-N. ENE	20.6	● a. p.
27	60.84	26.4	29.9	23.6	89.9	NE, ENE	14	5.2	Ci. W	Cu.-N. ENE, NE	34	● a. p.
28	61.76	24.6	26	22.5	92.6	ENE	19.5	9.3	Ci.-S.	Fr.-N. NE, ENE	34.2	● a. p.
29	61.05	25	27.7	22.6	80.8	NE	20.5	9.7	Ci.-S.	Fr.-N. NE	2.3	● a. p. ○ p.
30	60.67	25.4	28	23.1	82.3	NE	16.4	9.7	Ci.-S.	Fr.-N. NE	.5	d a.
31	60.36	25.2	29	23	85.5	NE	16.6	8.3	Ci.-S.	Fr.-N. NE	3.6	d a. p.
Mean	759.20	26	29.1	23.2	87.4	----------	13.9	7.2	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	653.5	

ATIMONAN.

[ϕ=14° 00′ N; λ=121° 55′ E; barometer above sea, 4 meters; gravity correction not applied, —1.74 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	759.21	27.1	29	24	83.4	NE	23.2	7.5	Ci. E	S.-Cu. NE	28.4	d° a. ◻° ●° p.
2	59.20	26.8	27.4	24	83.8	NE	25.7	9.7	Ci.-Cu. E	S.-Cu. NE	12.7	● a. ↙° d p.
3	58.60	25.8	27	23.5	84.5	NE	24.4	10	Ci.-S.	S.-Cu., N. NE	5.1	↙° ● a. p.
4	59.48	26.6	28.2	23.9	86.4	NE	21.1	9.7	A.-Cu. E	S.-Cu. NE	4.3	d a. ●° p.
5	60.61	27.3	30.3	24.4	84.5	NE	14.8	7.7	A.-Cu. E	S.-Cu. NE	1	d p.
6	60.60	27.3	29.3	25	81.7	NE	19.2	6.2	A.-Cu. NE	S.-Cu. NE	------	d² a.
7	59.18	27.3	29.2	24.8	80	NE	21	5.3	Ci.	S.-Cu. NE	------	d° a.
8	59.13	27	29.4	23.8	76.1	NE	18.5	4.7	A.-Cu. ENE	S.-Cu. NE	------	☋° p.
9	58.98	26.6	28.4	24.9	73.6	NE	28.7	5.5	Ci.-Cu., Ci	Cu. NE	------	☋° p.
10	59.27	25.5	26.6	23.4	85	N	25.4	9.8	Ci.-S.	S.-Cu., N. NE quad.	31.3	d² a. ● p.
11	59.72	26.2	27.3	23.9	85.5	NNE	26.4	8.3	A.-Cu. NE	S.-Cu. NE	11.3	●° a. d° ☋° p.
12	59.44	26.3	27.8	23.5	83	NE quad.	20.8	9.2	A.-Cu. E	S.-Cu. NE	8.2	●° a. ☋° p.
13	58.72	26.4	28.3	23.9	84.2	N quad.	16.2	7.8	A.-Cu. ENE	S.-Cu. NE	2.6	d² a. d° ☋° p.
14	58.60	26.8	28.9	24.4	84.4	N quad.	21	8.2	A.-Cu. NE	S.-Cu. NE	2.5	d° a. ●° ☋² p.
15	58.86	26.3	28	24	83.8	N	---------	9.3	A.-Cu ENE	S.-Cu. NE	2.3	d° ☋² p.
16	59.82	25	26.7	22.5	89.6	NE, N	---------	9.3	A.-Cu. NE	S.-Cu. NE	90.4	● a. ↙° ● p.
17	60.04	25.1	26	22.4	84	NE	44.4	10	Ci.-S.	N., S.-Cu. NE	1.8	● a. d° p. ↙° a. p.
18	60.65	25.8	27	22.8	72.8	NE	35.3	9.5	A.-Cu. NE	S.-Cu. NE	1.6	☋° a. d² a. p.
19	60.74	25.7	27.4	23.3	75.6	NE	27.4	9.2	A.-Cu. NE, ENE	S.-Cu. NE	.3	d° ☋° p.
20	60.18	26.1	28	23.5	78.2	NE, N	---------	9	Ci.-S. E	S.-Cu. NE	------	◡² d² a.
21	59.45	24.9	26.2	22.3	83.8	N	28	9.7	Ci.-S.	S.-Cu., N. NE	95.8	◡² a. ● p.
22	58.59	25.2	26	23.3	79.7	N	43.2	10	Ci.-S.	S.-Cu. NE	2.3	↙° d a. p.
23	58.14	25.2	26.3	23.3	88.5	NE, N	41.7	10	Ci.-S.	S.-Cu. NE	7.1	↙° ●° a. p. d° p.
24	59.98	24.6	26.2	23	85.7	NE quad.	47.4	10	Ci.-S.	S.-Cu., N. NE	6.6	↙° ●° a. p.
25	60.89	24.4	25.4	22.9	92	NNE, NE	31.1	10	Ci.-S.	N. NE	19.6	↙° d° a. ●° p.
26	60.71	24	25.3	22.6	93.8	NE	28	10	Ci.	N. NE	32	●° a. p.
27	61.30	24.8	26.5	23.2	92.8	NE	18.4	10	A.-Cu. E	N. NE	14.5	●° a. d° p.
28	62.34	24.6	25.5	23	90	NE	26.4	10	Ci.-S.	N. NE	22.4	● a. p. ↙° d p.
29	61.96	24.9	27.2	22.4	78.7	NE	32.7	9.2	A.-Cu. NE	S.-Cu. NE	------	↙° ●° a. p.
30	61.24	24.9	27.6	23.4	82.1	NE	25.1	8	Ci.	S.-Cu. NE	------	d² a.
31	61	25.1	27	23.3	80.4	NE	28.1	7.8	Ci. ENE	S.-Cu. NE	3.8	●° p.
Mean	759.89	25.8	27.4	23.5	83.3	----------	27.6	8.7	----------	----------	------	
Total	------	------	------	------	------	----------	------	------	----------	----------	407.9	

METEOROLOGICAL DATA, ETC.—Continued.

PARACALE.

[ϕ=14° 17′ N; λ=122° 47′ E; barometer above sea, 5.3 meters; gravity correction not applied, —1.73 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Prevailing form and its direction. Lower.		
	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.37	27.2	30.8	25	86	E quad.	1.7	7	Ci.	Cu.-N. E	1.8	● a. p. p° ≲ p.
2	59.24	27	29.4	24.4	86.5	NE	2.8	10	Ci.-S.	Cu., Cu.-N. NE	11.5	● a. p° p.
3	58.97	25.6	27.8	22.9	88.2	E quad.	3.2	10	Ci.-S.	Cu.-N. E	80.3	● a. p.
4	59.78	26.1	27.7	24.3	89.9	E quad.	1.7	10	Ci.-S.	Cu.-N. E	13.5	● a. p. p° p.
5	60.77	27	30.1	25	86.3	E	1.7	8.3	A.-Cu.	Cu.-N. E	3.6	●° a. p. p° ≲ p.
6	60.76	26.6	29.7	25.3	86	E quad.	1.3	6.7	Variable	Cu.-N. E	.3	d° a. p. ≲ p.
7	59.35	26.8	30.4	24.3	84.2	NE	1.5	5.7	Ci.	Cu. E	7.1	d° a. ● ≲ p.
8	59.10	26.1	30.4	23.2	84.2	ENE	1.5	6.8	A.-Cu.	Cu. E, NE	------	●° a. ☋° p.
9	59.18	26.4	29.3	25.3	76.5	NE	1.7	8.7	Ci.-S.	Cu. NE	3	
10	59.36	25.3	26.6	23.7	90.8	NE	1.5	9.5	A.-Cu.	Cu.-N. NE	8.4	● a. d° a. p.
11	59.54	27.2	30.4	25.4	83.3	NE	1.8	5.5	Ci.	Cu. NE	5.1	● a. p. ⌣² p.
12	59.65	25.7	28.2	23.7	86.8	ENE	1.2	9	Ci.-S.	Variable E quad.	24.1	● d a. p. ☋ p.
13	58.59	26.2	30	24.4	89.5	ENE	1.2	7.8	Ci., Ci.-S.	S.-Cu. E	10.4	● a. p. ☋ p.
14	58.59	26.8	30.5	24.7	87	E quad.	.8	6.5	Ci., Ci.-S.	Cu. E	12.2	≡° Ω a. ● ☋ p.
15	58.94	25.6	29.9	23.5	90.2	NE	.2	8.8	Ci.-S.	S.-Cu. E	1.4	●° Ω ☋ a. d p. ○°
16	59.66	24.2	27.6	23	94.2	NE	1.8	9	Ci.-S.	N. NE	99.7	● a. p. Ω ≡° a.
17	60.20	25.6	27.9	23	83.5	NE	4.7	10	Ci.-S.	S.-Cu. NE	1.3	●² a. ↙° ●° p.
18	60.92	25.6	28.7	23.9	80.8	NE	2.5	10	Ci.-S.	Cu., S.-Cu. NE	2.5	☋ a. ● a. p.
19	60.92	25.6	27.5	23.6	77.3	ENE	2.5	9	Ci.-S.	Cu., S.-Cu. NE	2	d a. p. ☋ p.
20	60.31	25.4	29.7	22.2	79.2	ENE	1.2	10	Ci.-S.	Cu. E	------	p° ○° a.
21	59.30	23.6	27.4	21.7	93.8	NE quad.	2	10	Ci.-S.	N. NE	52.3	Ω² ⌣ ●° ⊕ a. ● p.
22	58.48	24.4	25.7	23.7	88.8	NNE	3.2	10	Ci.-S.	S.-Cu., N. NNE	39.5	d a. ● a. p.
23	58.18	25.4	27.2	24.3	92.3	NE	3.5	10	Ci.-S.	S.-Cu. NNE	14.5	● d a. p. ↙° p.
24	59.88	24.7	26.2	23.8	89.3	NE	3.8	10	Ci.-S.	Cu.-N. NE	11.4	●° d a. p.
25	60.64	24.6	25.7	23.9	95	NE	2.2	10	----------	Cu.-N. NE	71.9	● a. p.
26	60.72	24.4	25.6	23.3	94.1	NE	2.8	10	Ci.-S.	Cu.-N. NE	72.4	●² a. ● p.
27	61.54	25.2	28.4	23.5	91.3	ENE	2.3	10	Ci.-S.	S.-Cu., Cu.-N. E	68.3	●·d a. p. ⊕ p.
28	62.47	25.6	27.1	24	86	ENE	3.2	10	Ci.-S.	S.-Cu. ENE	4.9	p° a. ● a. p.
29	62.19	25.1	27.2	22.9	76.8	NE	3	8	Ci.-S.	Cu., S.-Cu. ENE	2.8	●° d° a.
30	61.40	25.5	28.5	22.7	79.2	E quad.	1.8	8.8	Ci.-S.	Cu., S.-Cu. ENE	------	● a. d a. p.
31	61.18	25.4	29	23.4	80.2	ENE	2	5.5	Ci.	Cu., S.-Cu. ENE	11.7	d a. ● p.
Mean	759.97	25.7	28.4	23.8	86.4	----------	2.1	8.7	----------	----------	------	
Total	--------	------	------	------	------	----------	--------	----------	----------	----------	637.9	

SAN ISIDRO.

[ϕ=15° 22′ N; λ=120° 53′ E; barometer above sea, 20 meters; gravity correction not applied, —1.69 mm.]

	mm.	°*C.*	°*C.*	°*C.*	*Per ct.*		*0–12.*	*0–10.*				*mm.*	
1	759.10	25.5	31.2	20.5	80.6	E quad.	1.5	4.5	Ci.	SE	S.-Cu. ENE	------	Ω² a.
2	59.45	24.9	28.7	21.8	84.3	NE	1.3	6.7	Ci.-S.	SE	N. ENE	0.3	Ω² a. d p.
3	58.96	24.6	29.6	22.4	82.2	E quad.	2.2	9.2	Ci.-S.	SSW	N. E quad.	10.4	d a. p. ● p.
4	59.36	24.6	28.7	22	83	E	1.8	8.2	A.-Cu.	SE	N. E	------	● a. d° p.
5	60.63	25.4	30.2	22.6	81.2	Variable	2	5.7	Ci.	SE	Cu. E	------	↙° a. p. Ω p.
6	60.72	25.5	30.6	21.4	77.2	E quad.	2	4.5	A.-Cu.	ESE	Cu. E	------	Ω² d° a.
7	59.41	25.4	30.4	21.8	77.6	E quad.	1.7	5.7	A.-Cu.	E quad.	Cu. NE	.3	Ω a. p. d° a.
8	58.93	25	30.3	19.9	77.3	NW	1.3	3.3	Ci.		Cu. NE	------	Ω² a.
9	58.87	25.2	30.6	21.5	77.5	NW, NE	1.2	4	Ci.		S.-Cu. NE	------	Ω° a. p.
10	59.20	24.7	30.3	20	77.3	NW, E	1.2	3.5	A.-Cu.	ESE	S.-Cu. ENE	------	Ω² a.
11	59.68	24.7	30.6	19.9	80.3	N quad.	1.3	4.7	A.-Cu.	ESE	Cu. E	------	Ω a. p.
12	59.40	25	31.2	19.9	77.8	NW quad.	2	4.2	A.-Cu.	E	Cu. NE	------	Ω² a. Ω p.
13	58.81	25.5	30.3	21	78.3	N quad.	1.7	7.2	Ci.	SE	Cu. NE	1.8	Ω a. ○° ☋² p.
14	58.49	25.8	31.4	22.2	80.3	N quad.	1.7	6.5	A.-Cu.	E	Cu. NE	------	● ≡ a. ☋° Ω ≲ p.
15	58.67	25.7	31.2	22.4	79.5	E quad.	1.7	6.3	A.-Cu.	E quad.	Cu. NE	.3	d ☋° p.
16	59.55	25.1	30.1	21	77.7	NE	2.3	7	A.-Cu.	E	Cu. ENE	------	Ω² a. ○° ☋° p.
17	59.42	24.8	29.2	21.3	73.8	E, NW	2.2	6.2	A.-Cu.	E	Cu. NE	------	Ω a. p.
18	60.39	23.7	28.8	19.6	75.5	NW, E	2.3	4.8	A.-Cu.	ESE	Cu. E	------	Ω² ≡° a. ↙° Ω p.
19	60.46	23.7	29.5	19.2	74.2	NW, ESE	2.2	3.7	Ci.		Cu. E	------	Ω a. p. ☋° p.
20	60.01	23.2	28.3	18.2	73.8	NW	1.7	6.8	Ci.	SE	Cu. E	------	Ω ⌣² a. ○² p.
21	59.37	23.6	29.7	18.5	77.3	NW	1.3	7.5	Ci.-S.	SE	Cu. NE	------	Ω² ≡ ⌣² ○° a.
22	58.66	24.4	29.2	21	74.8	NE quad.	1.5	8	Ci.-S.	SE	Cu. NE	------	d° a. p. ○° p.
23	58.42	24.4	30.6	20.4	77.2	NW, NE	1.8	8	A.-Cu.	E	Cu. NE	------	⌣ a.
24	59.61	24.2	29.7	20	75.8	NE	1.8	6	Ci.-S.	SE	Cu. ENE, E	------	Ω ○° a. ○ p.
25	60.64	24.7	30.8	19.5	74	NW quad.	1.8	5.5	Ci.-S.	SE	Cu. ENE	------	☋ a. Ω a. p.
26	60.30	25.2	30.6	20.6	77	N quad.	1.7	6.7	Ci.	SE	Cu. NE quad.	------	Ω a.
27	61.17	25.4	29.7	22	76.8	N quad.	1.2	6.8	Ci.	SE	Cu. E quad.	7.6	
28	62.42	23.5	25.8	21.7	91.8	N quad.	1	9.2	Ci.-S.		N. NE quad.	2	● ⊤ a.
29	61.58	23.3	28.8	19.1	80.2	ESE	1.8	4.8	Ci.	SE	Cu. NE	------	Ω a. p.
30	60.88	23.5	29.2	19.2	80.3	E quad.	1.7	5.5	Ci.	SE	Cu. E	------	Ω² a.
31	60.72	23.6	28.7	19.5	74.7	NW, ESE	2.3	4.8	Ci.	SSE	Cu. E	------	Ω² ≡ a.
Mean	759.78	24.6	29.8	20.6	78.4	----------	1.7	6	----------	----------		------	
Total	--------	------	------	------	------	----------	--------	--------	----------	----------		22.7	

METEOROLOGICAL DATA, ETC.—Continued.

DAGUPAN.

[ϕ=16° 03′ N; λ=120° 20′ E; barometer above sea, 2.7 meters; gravity correction not applied, —1.67 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction.			
									Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0-10.*			*mm.*	
1	758.94	26	31.4	21.5	85.7	Variable	7.7	2.8	Ci.	Cu., S.-Cu.	------	
2	59.14	26.4	31.6	22.5	84.7	Variable	8	4.3	A.-Cu.	Cu., S.-Cu.	------	☾° p.
3	58.70	25.5	31.1	21.3	83.7	Variable	10.2	8.3	A.-Cu.	S.-Cu. E	0.8	☌° p.
4	58.92	25.6	32.9	21.9	84.7	SE	12.8	9	A.-Cu.	S.-Cu. ESE, SE	------	☌° a. ☾° p.
5	60.21	26.8	33.9	22.9	82.8	SE, S	10.3	5.7	Ci., A.-Cu.	S.-Cu. E	------	
6	60.35	27.1	34.5	21.5	79.2	SE	10.8	1	Ci.	Cu.	------	
7	59.03	26.2	33.9	21.2	83.4	SE	8.2	4	----------	S.-Cu. SE	------	
8	58.74	26.4	32.6	20.9	85.2	SE, NW	9.4	3	A.-Cu.	Cu., S.-Cu.	------	
9	58.64	26.1	33.8	21.3	85.6	S, NW	8.3	.7	Ci.	Cu., S.-Cu.	------	☾° p.
10	59.01	25.2	31.1	19.5	87.3	SE	7.2	.8	Ci.	Cu.	------	☌ p.
11	59.54	25.5	33.3	20	86	SE, N	8.8	1.7	Ci.	Cu., S.-Cu.	------	☌° p.
12	59.03	25.8	32.4	20.6	83.6	SE, S	8.9	3.8	Ci.	S.-Cu. ENE	------	☾ p.
13	58.65	26.1	31.5	21.1	88.7	S, SW	6.2	6.2	Ci.	Cu., S.-Cu.	------	☌° p.
14	58.28	26.8	32.2	22.8	88	SE, NW	8.1	5.8	Ci.-S.	S.-Cu.	------	☾ ⌜ p.
15	58.49	26.5	30.7	22.6	89	NW	7.4	6.7	Ci.	Cu., S.-Cu.	------	☾° p.
16	59.07	26.4	32.7	22.4	84.8	SE, S	7.8	8.3	A.-Cu.	S.-Cu. E	------	☌ p.
17	58.83	26.1	33.3	21.9	79.2	S, SE	16.6	5	A.-Cu.	Cu., S.-Cu.	------	☌ p.
18	59.45	25.4	32.5	21.2	78.6	SE quad.	20.1	1.8	Ci.	Cu., S.-Cu.	------	
19	59.82	25.6	32.9	20.7	77.7	S, SE	14.9	2	Ci.	Cu.	------	
20	59.58	25.1	32.4	20.4	83.5	S	8.8	5.8	Ci., A.-Cu.	Cu., S.-Cu.	------	☾ ☌° p.
21	59.25	24.1	29.6	19	88	SE, NW	7.4	9.3	A.-Cu.	S.-Cu.	------	
22	58.34	25	31.8	20.8	88.2	W quad.	5	8.5	A.-Cu.	S.-Cu. ENE	------	☾ a.
23	58.42	24.8	29.7	20.5	90.8	W quad.	6.6	9	A.-Cu.	S.-Cu. ENE	------	☾ a.
24	59.10	25.3	32.8	20.3	85	Variable	7.4	5.2	A.-Cu.	Cu., S.-Cu.	------	
25	60.67	25.1	30	20	88.8	S, NW	10.7	8.7	A.-Cu.	S.-Cu.	------	☾° a.
26	60.10	26.1	29.7	22.9	87	N quad.	9.4	3.8	A.-Cu.	S.-Cu.	------	
27	60.89	26.3	31.7	21.8	87.7	Variable	7.9	5.8	A.-Cu.	S.-Cu.	------	
28	62.04	25.2	29.9	22.1	88.2	SE, S	11.1	7	A.-Cu.	S.-Cu.	------	
29	60.97	25.5	32.8	21	83	SE quad.	14.1	3.5	Ci.	Cu., S.-Cu.	------	
30	60.68	25.3	32.4	19.8	84.4	S	8.9	5.3	A.-Cu.	Cu., S.-Cu.	------	
31	60.13	25.6	32.6	21	81.5	SE quad.	14.9	2.5	Ci.	S.-Cu. SE	------	
Mean	759.45	25.8	32.1	21.2	85	----------	9.8	5	----------	----------	------	
Total	---------	------	------	------	------	----------	---------	---------	----------	----------	.8	

BOLINAO.

[ϕ=16° 24′ N; λ=119° 53′ E; barometer above sea, 8.5 meters; gravity correction not applied, —1.65 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0-12.*	*0-10.*			*mm.*	
1	758.87	25	30.9	20.1	82.5	SSE, NNE	1.7	9.5	Ci.-S.	S.-Cu., Cu.	------	☊ ≡ a.
2	59.07	25.4	31	21.5	84.8	Variable	1	9.3	Ci.-S.	S.-Cu.	------	☊ ≡° a. ☾ d p.
3	58.50	25.1	30.5	21.5	83.2	SSE, S	1.8	10	Ci.-S.	S.-Cu.	0.8	☊ ≡° a.
4	58.76	26.2	31.1	22.5	81.8	SSE	2.2	10	Ci.-S.	S.-Cu.	------	●° d a.
5	59.98	27.1	32.9	22.8	77.2	SE quad.	2.3	10	Ci.-S.	S.-Cu.	------	☊° a.
6	60.16	27	33.9	21.4	77	SE quad.	2.5	4.7	Ci.-S.	S.-Cu.	------	☊ ≡° a.
7	58.89	26.1	32.8	21.7	81.5	SSE	1.7	3.8	Ci.-S.	S.-Cu.	------	☊ ≡° a.
8	58.55	26.8	32.2	21.4	78.5	SSE, NNE	3.2	3.8	Ci.-S.	S.-Cu., Cu.	------	☊ ≡° a.
9	58.47	26.6	32.1	22.7	80	SE quad.	2.5	4.2	Ci.-S.	Cu.	------	☊ ≡° a.
10	58.84	26.2	30.9	20.6	81.6	SSE, N	2.8	5.7	Ci.	Cu.	------	☊ ≡° a.
11	59.39	26.2	32.7	21.4	80.6	SE quad.	2.5	6.2	Ci.-S.	S.-Cu., Cu.	------	☊ ≡° a.
12	59.02	26.1	31.7	21.9	82.1	SE quad.	1.8	9.3	Ci.-S.	S.-Cu.	------	☌° ☊ ≡° a. ☋° p.
13	58.55	26.2	31.1	21.3	84.2	N quad.	1.7	10	Ci.-S.	S.-Cu.	------	☊ ≡° a. ☾° p.
14	58.30	27.3	31.5	23.1	81.3	N quad.	3.7	10	Ci.-S.	S.-Cu.	------	☊° a. ☇° ⌐☄° p.
15	58.54	27.1	29.5	26	81.5	NNE	5.3	10	Ci.-S.	Cu. NE	------	☽² p. ☇° a. p.
16	59.15	27.7	31.1	25.6	75.2	NNE	3.7	10	Ci.-S.	S.-Cu.	------	
17	58.56	26.5	33.4	21.4	73	SE quad.	2.8	10	Ci.-S.	S.-Cu.	------	☊° ≡° a.
18	59.11	26.3	33.6	22.4	68.1	SSE	4	10	Ci.-S.	S.-Cu.	------	☊° a.
19	59.52	25.5	32.5	21.6	71.3	SSE	3.2	9.5	Ci.-S.	S.-Cu.	------	☊° a.
20	59.46	25.6	32.3	21.4	76	SE quad.	2.3	10	Ci.-S.	S.-Cu.	------	☾° ☊° a. ☉² a. p.
21	59.09	25	30	19.3	80.8	SSE, NNE	3	10	Ci.-S.	S.-Cu.	------	☾° ☊² ≡ a.
22	58.33	26.2	30.4	21.1	74.3	NNE	3.3	10	Ci.-S.	S.-Cu.	------	☽² a.
23	58.42	25.8	29	20.9	83.2	NNE	4	10	Ci.-S.	S.-Cu., Cu. NNE	------	d ☉° a.
24	59.04	26.7	30	23.2	76.2	N quad.	3.5	10	Ci.-S.	S.-Cu.	------	☉° d° p.
25	60.67	25.2	29.7	20.7	81.8	N quad.	3.2	10	Ci.-S.	Cu. N	.1	☊ ≡ a. ☇°, p. ☽°
26	60.14	26.2	29.6	22.5	82	NNE	3.8	10	Ci.-S.	Cu. NE	------	☇° p a. ☽° p.
27	60.75	26.9	32.6	21.9	79.8	SE quad.	2	10	Ci.-S.	S.-Cu.	------	☊ ≡° a.
28	61.75	26	32	23	83.8	SE quad.	2.5	10	Ci.-S.	S.-Cu.	------	☊° a. ☉° a. p.
29	60.68	26.5	33.1	22.6	75.7	SSE	2.5	9.5	Ci.-S.	S.-Cu.	------	☊ ☊ ≡° a.
30	60.32	26	32.8	22	77.2	SSE	2.3	9	Ci.-S.	S.-Cu.	------	☊ ☊ ≡° a.
31	59.87	25.4	32.6	20.6	77.8	SE quad.	2.8	8.5	Ci.-S.	S.-Cu.	------	☊ ≡° a.
Mean	759.31	26.2	31.6	21.9	79.2	----------	2.8	8.8	----------	----------	------	
Total	---------	------	------	------	------	----------	---------	---------	----------	----------	.9	

METEOROLOGICAL DATA, ETC.—Continued.

BAGUIO.[1]

[ϕ=16° 25′ N; λ=120° 36′ E; barometer above sea, 1,512.5 meters; gravity correction not applied, —1.65 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	636.86	18.6	24.6	14.9	80.2	E quad.	13.3	6	Ci.-S.	Cu.	------	
2	37.06	18.1	23.4	14.5	82.3	E quad.	15.1	8	A.-Cu. SE	S.-Cu. ENE	0.5	p a.
3	36.34	17.2	19.8	15.3	85.5	E	15.3	10	A.-S.	S.-Cu. ENE	1.8	⊕ a. ●° p.
4	36.24	17.2	22	14.8	91.2	E	---------	9.6	A.-Cu. S	S.-Cu. ESE	------	●° ⌒° a.
5	37.90	18.2	23	14.9	79.5	E	---------	8.9	A.-Cu.	S.-Cu. E quad.	------	
6	38.25	18.4	23.3	15.2	66.7	E	14.6	2.6	Ci.	Cu. ENE	------	☊° a.
7	36.81	17.8	23.4	15	76	E, W	11.7	6	Ci.	S.-Cu. E, SEbyS	------	≡ p.
8	36.37	17.5	22.6	14.8	87.7	W quad.	11.8	6.6	Ci.	S.-Cu. NE, WNW	------	☊² a. ≡² p.
9	36.32	17.4	23.3	14.4	80.6	Variable	9.5	3.6	Ci.	S.-Cu. E	------	☊² a. ≡° a. p.
10	36.59	18.6	24.2	13.4	57.1	E	12.8	2	Ci.	Cu.	------	☊ ⊕ a. ☋ p.
11	37.16	18.1	23.5	14.5	66.8	E, W	9.7	5.6	Ci.	Cu.	------	≡ p.
12	36.83	17.9	23.9	14.3	77	SE, E	10.8	6.7	A.-Cu. ENE	S.-Cu. NE	------	☊ a. ≡ ⌒° p.
13	36.60	18.2	23	15.4	80.2	SE quad.	9.9	8.7	A.-Cu. ESE	S.-Cu. ESE	.5	☋ ≡ p.
14	36.33	18.1	23.6	15.3	83.7	SE quad.	10.2	8.4	Ci. W	Cu., S.-Cu.	------	☊ ●° a. ≡ p.
15	36.33	18.2	23.4	15.4	83	E	9.7	7.4	Ci.	Cu. E	------	☊² a. ≡ p.
16	36.91	17.8	23.5	15.3	84.2	W quad.	8.3	9.1	A.-Cu. ESE	Cu. ENE	------	☊² a. ≡² p.
17	36.34	16.6	22.5	13.5	76.7	E	21.5	7	Ci.-S.	Cu.	------	
18	36.64	16	23.4	13	77.2	SE quad.	20.1	7.1	Ci.-Cu. WbyN	Cu.	------	
19	36.85	16.3	21.8	13	66.4	E	15.3	7.1	Ci.	S.-cf. E	------	∞ p.
20	36.60	16.2	22.3	13.6	82.8	SE	9.1	9.6	Ci.-S.	Cu.	------	☋☊◯°⊕°a.≡ p.
21	36.14	15.7	22.2	11.8	82.2	Variable	7.6	8	A.-S. SE	Cu.	------	☊² ⊕ a. ≡° p.
22	35.86	17	22.6	13.5	85.2	E quad.	9.8	9.1	A.-Cu. E	S.-Cu. E	------	≡² p.
23	35.91	16.8	20.7	14	88.2	E quad.	---------	10	A.-S.	S.-Cu. NE quad.	------	≡² p.
24	36.42	16.8	23.5	13.7	79	E	17.6	9.1	Ci.-S. SSW	S.-Cu. ESE	------	◯ ⊕ a. p.
25	37.62	16.8	23.9	13	84	E	13.4	9.6	A.-Cu. SW	Cu.	------	☊° ◯ ⊕ a. ≡² p.
26	37.36	17.3	23.7	14.2	84.8	E	13.2	7.9	Ci. SW	Cu.	------	☊ a. ≡° p.
27	38.27	17.7	23.7	15	82.5	E	---------	8.4	Ci.	S.-Cu. E, ESE	------	◯° a. ≡ p.
28	39.04	17.4	21	15	79.6	E	---------	9.4	A.-S.	Cu., S.-Cu.	------	⊕ a. p.
29	37.89	16.5	23.8	14	84.2	E	14.4	7.6	Ci.-S.	Cu.	------	≡ p.
30	37.57	16.6	21.6	13.5	88.8	Variable	12.8	8.9	Ci.-S.	Cu. NNW	------	☊ a. ≡° p.
31	37.13	16.2	22.5	13.5	83.3	E	15.5	6.3	Ci.-Cu. W	Cu. E	------	☊ a. ≡° p.
Mean	636.92	17.3	22.9	14.2	80.2	----------	12.8	7.6	----------	----------	------	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	2.8	

VIGAN.

[ϕ=17° 34′ N; λ=120° 23′ E; barometer above sea, 20 meters; gravity correction not applied, —1.61 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	759.12	25.8	30.6	22	83.6	Variable	0.7	0	Ci.-S., Ci.	Cu., S.-Cu.	------	☊ a.
2	59.32	28.1	34.3	23.2	68.5	NE quad.	1.8	1.5	Ci.-S.	S.-Cu.	------	
3	58.83	29	32.5	25	52.6	NE	1.7	5.7	Ci.-S.	S.-Cu.	------	
4	59.04	28.4	31.7	24	57.5	NE quad.	1.2	8.3	Ci.-S.	S.-Cu.	------	d° a. p.
5	60.39	28	33.2	23.7	64.7	Variable	1	1.8	Ci.-S.	Cu.	------	≡ a.
6	60.62	26.3	32.6	22.4	74.3	Variable	.8	.3	Ci.-S.	S.-Cu.	------	
7	59.21	26.4	31.2	22	78.2	Variable	1	.2	Ci.-S.	S.-Cu.	------	☊ a.
8	58.92	26.1	31.3	22	77.8	Variable	.8	3	Ci.-S., A.-Cu.	S.-Cu.	------	☊ a.
9	58.95	25.6	31.3	21	76.4	N quad.	1	.3	Ci.-S.	S.-Cu., Cu.	------	
10	59.27	25	30.4	20.2	79.8	N quad.	1.3	0	Ci.-S.	Cu.	------	☊ a.
11	59.80	25.4	29.8	21.3	78.1	N quad.	1.2	.2	Ci., Ci.-S.	Cu.	------	☊ a. ☋ p.
12	59.13	27	33.1	21.8	72.7	NE quad.	1	.2	Ci.-S., Ci.	S.-Cu.	------	☊ a.
13	58.79	27.3	31.9	23.4	67.5	N	.8	8.3	Ci.-S.	S.-Cu.	------	☋ d a.
14	58.78	26.3	30.4	23.9	73.8	NNE	2.2	7.7	Ci.-S.	S.-Cu.	------	◯ p.
15	59.27	25.1	28.5	22.9	74.5	NNE	3.2	6	Ci.-S., A.-Cu.	S.-Cu.	------	☋ a.
16	59.96	26.6	32.3	22.1	61.3	NE quad.	1.8	4	Ci.-S.	Cu.	------	☋ p.
17	59.01	27.4	32.4	22.6	49.2	NE	2.2	3.2	Ci.-S., Ci.	Cu.	------	
18	59.57	26.6	31	23	58.9	NE quad.	1	4.3	Ci.-S.	S.-Cu.	------	☋ a.
19	59.95	25.6	31.6	21.1	65.8	E quad.	.8	.3	Ci.-S.	S.-Cu.	------	
20	59.83	25	30.8	20.6	75.5	E	1.2	.3	Ci.-S.	S.-Cu., Cu.	------	
21	59.54	24.6	29.8	21	69.8	N quad.	1	6.2	Ci.-S.	S.-Cu.	------	⌣ a.
22	58.97	25.8	32.4	20	63.2	N quad.	1.5	3.8	Ci.-S.	S.-Cu.	------	☋ a.
23	59.09	24.3	28.5	21	71.8	N quad.	2.5	3.5	Ci.-S.	S.-Cu.	------	☋ a.
24	59.50	25	30.7	19.7	64.1	NE quad.	1.2	1.2	Ci.-S.	S.-Cu.	------	
25	60.87	24.5	30	21	72.3	N quad.	1.2	8.2	Ci.-S.	S.-Cu.	------	
26	60.41	25	31.3	19.5	75.8	N quad.	.8	2.3	Ci.-S.	S.-Cu.	------	☋ a.
27	60.97	26.6	32	21.3	74.2	NW quad.	1	3.8	Ci.-S.	S.-Cu.	------	
28	61.62	27	32	22.8	69.2	Variable	.8	4	Ci.-S.	S.-Cu.	------	
29	61.11	26.7	31.9	23.2?	64.2	Variable	.8	2.5	Ci.-S.	S.-Cu.	------	
30	60.65	26.2	31.7	22.8	70.8	Variable	.8	.5	Ci.-S.	Cu.	------	
31	60.28	25.8	31.6	21.7	76.6	Variable	.8	3.8	Ci.-S.	Variable	.8	●° p.
Mean	759.70	26.2	31.4	22	69.8	----------	1.3	3.1	----------	----------	------	
Total	--------	------	------	------	------	----------	----------	----------	----------	----------	.8	

[1] The barometric readings of this station are not reduced to sea level.

METEOROLOGICAL DATA, ETC.—Continued.

TUGUEGARAO.

[ϕ=17° 36′ N; λ=121° 40′ E; barometer above sea, 23 meters; gravity correction not applied, —1.61 mm.]

Day.	Pressure (mean).	Temperature.			Relative humidity (mean).	Wind.		Clouds.			Rain, 24 hours beginning 6 a. m.	Miscellaneous.
		Mean.	Maximum.	Minimum.		Prevailing direction.	Force (mean).	Amount (mean).	Prevailing form and its direction. Upper.	Lower.		
	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*0–12.*	*0–10.*			*mm.*	
1	760.26	25.4	31.4	20.7	86.2	NE	0.5	5.8	Ci.	Cu.-N. NE	------	☊ a.
2	61.13	25.3	30.5	22.5	86.3	N quad.	1.2	5.8	Ci.	Cu. E	7.4	☊ a. ● p.
3	61.30	23.2	26.3	20.5	93.1	Calm	0	9.7	------	N. N	27.1	d a. ● a. p.
4	61.90	23.4	25.3	21.5	93.8	Calm	0	10	------	N.	5.9	● d a. p.
5	62.40	24.2	29.4	21.5	89.8	NE	.2	7.3	Ci.	N. S	------	≡ a. d p.
6	61.94	25.6	32.6	21.7	87.4	Calm	0	5.5	------	Cu. SE	------	d a.
7	60.43	25.4	31.4	22.1	86.7	S	.2	7.8	------	Cu.-N., S.-Cu.	------	☊ ≡ d a.
8	59.66	25.1	31	22.5	87.8	NW	.7	6.2	Ci.	Cu.-N. S	------	d a.
9	60.15	24.2	31.5	19.5	79	N, NE	.3	1	------	Cu. N	------	☊ a. ☋ ☊² p.
10	60.82	24.1	30.7	19.6	88	SE	.2	4.8	A.-S.	Cu. SE	------	☊² ☋ p.
11	61.18	24.3	29.5	21.4	88	NE, NW	.5	7.7	------	Cu., S.-Cu. N	------	d a. ☊² p.
12	61.20	23.6	27.6	21.5	93.3	NW	.5	9.7	------	N., Cu.-N.	50.6	☊² a. ● a. p.
13	60.78	23.4	26	21.4	96	NW	.3	10	------	N. N	129.8	●² a. p.
14	60.15	23.2	25.5	21.9	94.5	NW	1	10	------	N. N	37.8	●² a. ●° d p.
15	60.73	22.8	26.4	21	94.3	NW	2.3	10	------	Cu.-N. NW	2	● a. p.d p.
16	62.47	22.4	25.7	20	86	NW	3.2	8.5	A.-S., Ci.-S	S.-Cu. N	------	
17	62.37	22.6	26.2	20	80.7	N quad.	1.5	8.8	------	S.-Cu. NW	------	☊ a·
18	62.40	22.2	26.5	19.6	89.3	Calm	0	6.8	------	Cu.	------	d a. ☊² a. p.
19	62.01	22.6	28.5	18.9	87.3	SW	.2	6.5	Ci.	S.-Cu. SE	------	☊² ≡ a.
20	60.83	22.8	29.6	17.7	85.2	NE	.2	4.5	Ci.	Cu. S	------	☊² ≡ a.
21	60.85	22.3	26.3	18.5	88.5	NW	1	8.3	Ci., Ci.-S.	S.-Cu. NW, ENE	------	☊² a.
22	60.58	22.5	26.8	19	86.8	NE, NW	1.5	8	Ci.-S.	S.-Cu. NE	2.5	☊² a. ● d p.
23	60.62	22.9	26.4	21	88.8	NW	2	9.7	------	cu.-N.,s.-cu.N,NW	------	● d a. d p.
24	61.86	22.9	26.9	20	80.4	NW	1.3	8.7	Ci.-S	S.-Cu. N	------	☊² a.
25	62.50	22.8	27.3	19.5	88.5	NW	.8	8	Ci.	S.-Cu. NW	------	☊ a.
26	62.19	23.1	27.2	20	87	NE, NW	.7	7.5	Ci.-S., Ci.-Cu.	S.-Cu. N	------	☊ a. d p.
27	63.10	24.1	28.1	21	87.3	Calm	0	8.3	------	S.-Cu. E	------	☊² a.
28	64.30	23.6	27.5	21	83.6	NE	.7	8.5	Ci.-S.	S.-Cu.	------	d a.
29	63.34	22.8	25.7	20	86.3	NW	.2	7.8	Ci.-S	S.-Cu. ENE	------	☊ a. d p.
30	61.89	23.8	30	20	87	N	.2	7.7	------	S.-Cu.	------	☊ a.
31	62.04	23.6	27.7	21.3	84.8	Calm	0	8.5	------	S.-Cu.	------	☊ a.
Mean	761.53	23.6	28.1	20.6	87.8	------	.7	7.7	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	263.1	

APARRI.

[ϕ—18° 22′ N; λ=121° 38′ E; barometer above sea, 5 meters; gravity correction not applied, —1.57 mm.]

	mm.	*°C.*	*°C.*	*°C.*	*Per ct.*		*Km. p. h.*	*0–10.*			*mm.*	
1	760.92	25.6	29.2	22.6	84.7	E quad.	12.7	0.5	Ci. SE	S.-Cu., Cu.-N.	------	☊ a.
2	61.99	26	29.5	23.6	78.2	E quad.	17.6	2.8	Ci.	S.-Cu. E	7.6	
3	61.84	24.9	28.1	22.1	84.3	E quad.	14.7	7.2	------	S.-Cu. E	5.1	● a. p.
4	62.23	23.5	26.4	21.7	92.2	Variable	6.5	10	------	S.-Cu., N. ESE	12.9	●° a. ● p.
5	62.61	23.6	27.9	21.6	94.1	S quad.	5	7.7	A.-Cu. E	S.-Cu., Cu.-N. SE	4.3	● a. p. ☊ p.
6	62.23	25.3	30.4	22	85.5	SE quad.	11	3.3	A.-Cu. E	Cu.-N. SE	------	● ≡ a
7	60.72	24.8	28.5	22.4	85	E quad.	8.2	4	------	S.-Cu., Cu.-N. SE, E	------	
8	60.27	24.2	29.2	21.1	82.3	S, NE	7.1	1.3	A.-Cu. S	S.-Cu., Cu.-N.	------	☊ a.
9	60.54	24	28.1	20.4	86.2	NW quad.	7.9	2.5	------	Cu.-N., S.-Cu. E	2.8	☊ ≡ a. ☋ p.
10	60.93	23.8	27.1	21.6	90.8	SW quad.	7	9.2	Ci. E	N. E	5.6	● a. p.
11	61.69	23.6	27	22.1	91.7	NE, SW	11.3	8.3	------	S.-Cu., N. NE	13.7	● a. p.
12	61.66	24.3	26.7	22.2	88	E quad.	26.6	10	------	N. ENE	75.6	● a. p.
13	61.34	24.6	25.9	22.5	87.9	E quad.	23.6	10	------	S.-Cu. E	54.6	● a. p.
14	61.06	23.5	25.5	22	90.8	ENE	24.3	10	------	N. ENE	38.8	● a. p.
15	61.85	22.8	24.5	21	90.2	ENE	30.3	10	------	N. NE	31.4	● a. p.
16	63.62	22.6	24.4	20.1	82	NE quad.	30.8	10	------	S.-Cu., N. NE	2.3	● a.
17	62.91	23	25.5	20.8	69.3	E	22.9	10	------	S.-Cu. E	------	
18	62.63	22	26	19.6	82.8	SW, SE	6.3	8.7	------	S.-Cu. E, S	------	
19	62.03	22.4	27.9	19.6	84.8	SE quad.	4.8	3.7	A.-Cu. SE, E	S.-Cu.	------	≡ a.
20	61.08	22.7	28.1	18.5	83.2	S	5.8	1.2	Ci.	S.-Cu. E	------	☊ ≡ a.
21	61.49	22.6	26.4	19.3	83.8	SW, NE	8.7	9.7	------	S.-Cu. E	.6	●° p.
22	61.47	22.7	25.3	19.4	84.8	NE	16.6	7.8	Ci. E	S.-Cu., Cu.-N. NE	7.3	● a. p.
23	61.69	23	24.2	21.1	78.8	NE	29.2	10	------	S.-Cu., Cu.-N. NE	1.6	● a. p.
24	62.53	23.2	26	21.5	75.5	E	16.5	10	------	S.-Cu. E	------	
25	63.02	22.8	26	20.4	84.7	E quad.	4.4	9.7	------	S.-Cu. SE, E	------	
26	62.82	23	26.8	20.5	85.2	NE	12.4	8	------	Cu.-N. NE	.3	◠ a. d p.
27	63.71	23.5	27.1	21.1	85.2	E quad.	8.9	10	A.-Cu. SE	S.-Cu. E	2.5	
28	65.03	23.4	26	21.5	80	E	14.9	10	------	S.-Cu. E	------	● a.
29	63.73	22.5	25.8	21	82	E	9	9.2	------	S.-Cu. E	2	● p.
30	62.07	23.3	26.9	20.1	80.9	E, SE	6.8	5.8	Ci.-S. SW	S.-Cu. E, W	------	
31	62.26	23.1	27.6	21.1	77.2	E, SE	3	8.5	A.-Cu. E	S.-Cu. E, S	------	
Mean	762.06	23.6	26.9	21.1	84.3	------	13.4	7.4	------	------	------	
Total	------	------	------	------	------	------	------	------	------	------	269	

METEOROLOGICAL DATA FOR THIRD AND FOURTH CLASS STATIONS.

ISABELA, BASILAN.

[$\phi = 6°\ 42'$ N; $\lambda = 121°\ 58'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.1	22.5	96	75	8	10	------	☊ a. p° p.
2	29.8	22	96	90	10	10	54.9	☊ a.
3	27.3	21.5	100	84	10	10	20	↙ ●² a. ● p.
4	30.3	21.2	98	83	2	5	------	☊ a.
5	29.8	21	97	79	10	10	------	☊ a. p° p.
6	------	22	97	72	4	5	------	☊ a.
7	30.3	22.5	96	84	10	10	6.6	☊ a. d p p.
8	30.3	23	97	75	10	6	------	d a. p° p.
9	31.8	21.8	98	64	0	7	------	☊ a.
10	32.3	23	92	76	9	7	------	☊ a. ↘ p.
11	31.3	21.5	93	64	3	6	------	☊ a. ↘ p.
12	30.3	22	97	75	9	5	------	☊ a.
13	30.8	22.4	95	69	9	9	1	☊ p a. ↘ p.
14	30.8	23	96	90	10	10	1.3	p° a. ●° p.
15	30.8	22	98	92	10	10	17.3	p° a. ⌐◪ ● p.
16	31.3	22	98	92	10	10	3.3	d a. ●° p.
17	30.3	22.2	97	94	10	10	27.7	☊ ● a. d p.
18	30.1	22.5	96	92	10	10	4.1	☊ ●° a. d p.
19	29.8	22.2	98	85	10	10	------	☊ a.
20	30	22.5	96	75	10	10	------	☊ a. p° p.
21	29.8	22.5	96	74	10	10	------	☊ a. p° p.
22	29.8	23.4	92	78	9	9	6.1	☊ a.
23	29.5	23.5	95	88	10	10	12.2	d a. ● a. p.
24	30.3	22.5	97	76	9	10	1.3	d a. ●° p.
25	31.1	22.2	94	77	10	10	------	☊ a.
26	32.3	22	96	73	3	6	------	☊ a.
27	31.5	22.5	96	66	9	7	------	☊ a.
28	33.1	23.2	96	60	10	5	------	☊ a.
29	31.3	22.8	91	62	10	4	------	☊ a.
30	31.5	21.8	96	72	3	10	------	☊ a.
31	31.9	23.2	92	73	10	10	------	
Mean	30.7	22.3	95.9	77.7	8.3	8.4	------	
Total	------	------	------	------	------	------	155.8	

ZAMBOANGA.

[$\phi = 6°\ 54'$ N; $\lambda = 122°\ 05'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	22.4	91	76	8	9	------	⌐◪ d p.
2	29.9	22	87	75	9	10	161	● p.
3	26.9	20	100	82	10	10	54.4	↙° ●² a. p.
4	30.4	22	93	72	3	7	------	☊ a.
5	31.5	22.9	91	67	7	8	------	⌐◪ a.
6	31.4	22.4	93	76	3	7	------	☊° a.
7	31.4	23	95	74	6	10	------	
8	28.5	23.8	87	78	10	9	9.4	● a.
9	30.6	22.5	91	71	2	3	------	☊ a.
10	32	22.5	91	71	7	5	------	
11	29.9	23.3	86	74	5	9	------	
12	30	22.9	91	77	10	9	3.3	↘ ● p.
13	29.7	23	91	76	10	9	2.5	● p.
14	30.4	23	92	77	10	5	------	d° a.
15	30	23	93	78	10	8	------	⌐◪ p.
16	31.1	23.3	95	74	10	10	------	☊° a.
17	31.1	23.1	89	73	10	10	------	
18	30.6	23.9	89	92	10	10	------	p p.
19	30	23.5	87	73	10	10	------	⌐◪ ⌒ p.
20	29.6	23.1	91	72	10	9	------	
21	29.6	22	86	66	10	10	------	
22	31.1	23	89	70	9	8	------	
23	28.3	23.4	95	82	10	9	11.4	● d p.
24	28.1	23.8	88	86	8	10	------	⌒ a.
25	30.3	23	93	72	9	8	------	
26	30	22.8	88	72	8	8	------	
27	30	22.6	87	72	5	8	------	
28	31.5	23.5	90	79	10	10	------	
29	30.9	22.6	92	64	10	10	------	
30	30.1	22.7	90	73	4	9	------	
31	30	22.4	86	73	9	10	------	
Mean	30.2	22.8	90.5	74.7	8.1	8.6	------	
Total	------	------	------	------	------	------	242	

DAVAO.

[$\phi = 7°\ 01'$ N; $\lambda = 125°\ 35'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.7	21.2	96	72	6	8	24.9	⊤ ● p.
2	25.3	21.4	96	94	10	10	153.6	↙² ●² ⊤ p.
3	28.7	21.6	96	77	5	7	23.9	●² p.
4	29.8	21.5	96	76	6	8	------	
5	31.9	22.1	96	71	5	6	14.2	● p.
6	30.7	21.9	97	77	5	10	------	
7	31.4	21.9	97	84	6	7	23.6	● p.
8	32.7	20.9	97	60	6	6	------	
9	33.3	22	96	61	5	7	------	
10	31.2	22.9	97	71	6	8	------	
11	32.2	21.5	96	67	6	7	------	
12	32.1	22.7	96	61	6	5	------	
13	31.2	22.5	96	67	6	5	------	
14	28.7	22.6	96	79	7	8	------	
15	30.5	22.1	96	72	6	5	------	
16	31.7	21.9	97	68	5	7	19.8	● p.
17	30.4	21.8	96	69	8	6	21.8	● p.
18	31.3	21.4	94	66	5	7	------	
19	31.6	22	94	71	6	5	------	
20	29.9	22.9	93	72	5	8	------	
21	30.8	21	92	71	5	6	33	● p.
22	29.7	20.8	96	70	5	5	------	● a.
23	30.7	21	95	70	5	6	------	
24	31.3	22.3	98	71	5	6	------	
25	30.9	22.8	97	70	5	6	------	
26	31.2	22.7	93	65	5	6	------	
27	33.3	22	97	68	7	7	------	
28	31.7	22.4	98	71	5	6	------	
29	31	21.3	98	70	7	6	------	
30	32.2	21.3	96	66	5	5	------	
31	30.1	21	97	71	6	8	------	
Mean	30.9	21.9	96	70.9	5.8	6.7	------	
Total	------	------	------	------	------	------	314.8	

COTABATO.

[$\phi = 7°\ 13'$ N; $\lambda = 124°\ 15'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	22.1	96	70	5	10	3.3	☊ a. ⊤ d² p.
2	24.5	22.4	96	93	10	10	57.9	d² a. p. ↙° ●° p.
3	30.9	22.1	96	71	10	8	.3	↙° ●² a. d a. p.
4	33.1	22.8	97	67	7	7	------	☰ ☊° a.
5	34.1	24.2	91	67	3	3	------	☊² a.
6	31.4	23	94	71	4	8	------	☊ a. ⌒² d° p.
7	31.8	23.1	90	79	9	10	6.1	☊ a. ⊤ ● p.
8	30.5	23	96	71	10	5	------	☰° ☊° a. ⋓ p.
9	31.8	23	96	68	4	3	2.8	☰° ☊ a. ⌐◪ ●° p.
10	32.1	23.4	97	71	3	6	2.8	☊² a. ⊤ ⌒° ● p.
11	31	22.5	97	65	8	8	.3	☰° ☊ a. d p.
12	31	23.2	95	87	4	9	7.1	☊² a. ●° ⊤ d° p.
13	30.6	23	97	75	10	10	11.9	☰° ☊² a. ● ⌐◪² p.
14	32.1	23.7	97	74	4	6	.3	☊² a. ⊤° ⌒ d° p.
15	30.7	23.6	97	72	10	9	------	☰° ☊² a.
16	30.8	23.7	96	80	10	10	------	☰ ☊ a.
17	31.1	23.6	94	78	10	10	1.5	☊² a. ⌐◪ ● p.
18	30.2	23.5	96	78	10	10	4.6	☰° ☊² a. ○○² ●° p.
19	31.3	23.7	96	72	10	10	1.3	☊² a. ○² d ⌐◪ p.
20	32	22.7	94	75	10	10	------	☊ a.
21	28.8	23.1	95	77	10	10	------	☰° ☊° a.
22	31.4	22.7	97	73	4	6	7.9	☰° ☊² a.
23	31	23	96	72	6	5	------	● a. d° ⌐◪° p.
24	32.3	23.1	97	73	5	3	------	☰° ☊² a. ⊤° p.
25	31.9	23.5	95	71	3	3	------	☊ a. ↘ p.
26	33.2	23.8	94	70	8	3	6.4	☊² a. ⌐◪ ● p.
27	32.8	23.6	95	71	4	9	2.5	☰° ☊ a. ●° ↘ p.
28	32	21.9	96	72	8	8	.5	☰° ☊² a. d p.
29	32.6	21.6	90	72	3	8	.5	☊ a. d° p.
30	33.6	23	93	69	7	4	------	☊ a.
31	30.7	21.5	94	65	3	10	.8	☊ a. d² p.
Mean	31.3	23	95.2	73.2	6.8	7.5	------	
Total	------	------	------	------	------	------	118.8	

METEOROLOGICAL DATA, ETC.—Continued.

DAPITAN.

[$\phi = 8°\ 40'$ N; $\lambda = 123°\ 25'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.7	21.1	92	77	10	8	28.7	● a. p.
2	26.4	20.5	90	84	10	10	40.4	● a. p. d p.
3	27.3	20.9	87	83	10	10	64.5	● a. p.
4	28.5	22	88	79	7	8	9.7	● a. p.
5	29.8	22.6	84	74	5	4	------	● a. ↙ p.
6	30.2	22.9	85	72	10	9	------	○ d p.
7	29.5	22.4	84	74	9	7	6.4	● a. p.
8	29.2	21.9	84	76	10	8	.8	● a. ○ p.
9	29	21.7	84	77	10	6	6.4	● a.
10	29.3	21.9	88	72	10	10	2	● a. p.
11	28.6	22.3	82	77	9	8	------	●° a.
12	28.7	21	83	78	10	10	2.8	● a. ○ p.
13	28.9	22.5	91	78	9	7	------	
14	27.1	20.7	84	81	8	10	13	● a. p.
15	30	22.3	83	72	10	9	------	● a.
16	29.9	21.9	87	75	9	8	3.6	● a. ∪ p.
17	29.4	21.5	89	74	10	8	2	● a. ⌒ p.
18	29.7	21.3	88	72	10	7	1.8	● a. ↙ p.
19	28.3	21.4	87	87	10	10	4.8	● a. p. ☾ p.
20	28.9	21.6	87	72	8	10	------	d ⌒ p.
21	28.5	21.7	90	78	10	10	------	○ p.
22	28.9	21.9	89	73	4	7	------	
23	30.4	22.1	85	71	6	4	------	
24	30.1	22.3	85	71	8	10	7.1	
25	30.3	22.3	84	70	10	9	8.6	● ↙ a. p.
26	30.4	22.5	82	70	10	5	1.3	● a.
27	30.2	22.1	86	70	8	5	------	
28	30.1	22	89	70	8	8	------	○ p.
29	28.6	22	85	78	10	9	------	d a.
30	29.7	21.9	89	73	8	5	------	↙ p.
31	28.4	21.6	88	79	10	10	------	○ ↙ p.
Mean	29.1	21.8	86.4	75.4	8.9	8	------	
Total	------	------	------	------	------	------	203.9	

BUTUAN.

[$\phi = 8°\ 56'$ N; $\lambda = 125°\ 32'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	27.3	22.5	96	92	9	10	22.6	☊ d a. ● a. p.
2	24.5	22.5	97	96	10	10	77.7	d ● a. ☿ p.
3	28.3	22.6	96	81	10	9	------	↘ ⊤ p.
4	28	24	94	85	10	9	18.3	☊ d a. ● p.
5	30.1	23.2	96	68	8	7	6	● ◜☿ a. ●° p.
6	26	22.9	97	90	10	10	4.3	● a.
7	29.4	22.4	97	74	7	7	------	d° a. p.
8	28.1	22.4	98	71	7	6	------	☊ ○ a.
9	28.7	22.2	96	78	4	9	------	☊ ≡° a. d° p.
10	28.7	22.6	97	88	8	7	8.6	☊ a. ● a. p.
11	28.2	22.8	97	86	8	9	14.5	● a. p. ◪ p.
12	27.4	23.1	96	78	10	8	12.4	● a. d ∪ p.
13	28.3	23.7	94	87	10	10	5.6	● a. p.
14	29.1	22.9	95	85	7	10	7.1	● a. p. ⊤ ↘ d p.
15	26.5	23.3	96	84	10	10	38.4	☊ d a. ● p.
16	27.7	23.3	98	78	9	8	.3	● a. d° a. p. ∪ p.
17	28.5	23.7	97	76	9	7	36.8	☊ a. d ● p.
18	27	23.6	97	84	10	10	1.8	● a. d p.
19	26.3	23	97	89	9	10	27.9	● a. p. d p.
20	26.6	23	94	82	10	10	.8	● d° a. ●° p.
21	25.5	22.9	93	92	9	10	6	☊ a. d° ● a. p.
22	27.7	22.9	87	69	10	9	------	○ p.
23	29.8	22.5	94	70	8	3	1.5	☊ a. ⌒ ⊤ ↘ p.
24	30.5	23.7	96	54	5	8	9.7	● a. p. ↘ p.
25	28.6	23.6	96	78	7	8	2.8	☊☿ ● a. ☿ p° p.
26	29.8	23.7	95	85	6	7	1	☊☿ a. ●° ⊤ p.
27	29.3	22.9	97	70	5	6	.5	☊ ○ a. d. ● ⌒ p.
28	29.1	21.8	91	85	6	8	6.4	☊☿ a. ● p.
29	28.4	21.6	97	72	7	8	------	☊☿ a. ○ p.
30	28.1	21.6	98	67	6	5	1.8	☊☿ ≡ a. ○ p.
31	28.5	22.4	97	74	9	9	1.3	● a. p. ○° p.
Mean	28.1	22.9	95.7	79.6	8.2	8.3	------	
Total	------	------	------	------	------	------	314.1	

DUMAGUETE.

[$\phi = 9°\ 18'$ N; $\lambda = 123°\ 19'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.5	------	88	89	8	10	3.3	d a. p p.
2	29.5	------	80	71	10	10	34.3	☊ a. ↙° ● p.
3	28	------	84	82	10	10	16.5	↙ a. ↙° ● a. p.
4	31	------	87	78	10	6	------	☊ a.
5	29.8	------	83	80	6	3	.8	
6	30.2	------	81	79	10	10	------	●° a. ⊤ p.
7	30.3	------	87	75	10	3	2.3	d ⌒ a.
8	29.8	------	83	66	4	10	------	●° a.
9	30.4	------	90	70	10	3	9.7	◪ p p.
10	30.5	------	91	77	10	10	------	
11	30	------	90	75	10	10	------	↘ d a.
12	30.3	------	82	74	10	10	2.3	↘ a. d p.
13	29.6	22	85	75	10	10	4.3	d a. ∪ ●° p.
14	30	21.9	87	78	10	6	------	
15	29.9	22.1	93	73	10	10	19.3	☊ a. d ∪ p.
16	29.7	21.5	97	77	10	10	------	∪ p.
17	30.3	22.2	90	72	10	10	.8	☊ a. d p.
18	29.6	22.2	88	74	10	10	2.8	
19	29	24	95	78	10	10	3.3	●° a. ☾ p.
20	29	23.6	91	70	10	10	.8	●° a.
21	29.9	23.2	74	63	10	10	------	d a. p.
22	30.7	23.5	76	70	10	10	------	∪ a.
23	30.6	23	89	74	10	10	------	☊ a. ↘ p.
24	29.6	24.2	90	79	10	8	67.1	d a. ● ↘ p.
25	29	23.2	95	82	10	10	------	◪ ● a. ○ ↘ p.
26	30.1	24.8	82	72	10	10	------	
27	30.2	25.1	88	71	10	8	------	
28	30.3	24.4	86	71	10	10	------	↘ a.
29	29.8	24	87	75	10	10	7.1	d a. p p.
30	29.4	23.8	92	79	10	10	------	☊ d a.
31	28.5	23.8	79	81	10	10	3	
Mean	29.8	23.3	86.8	75.2	9.6	8.9	------	
Total	------	------	------	------	------	------	177.7	

YAP (WESTERN CAROLINES).

[$\phi = 9°\ 29'$ N; $\lambda = 138°\ 08'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.8	25.9	88	82	9	8	6.8	● ○° ↘ p.
2	30.6	24.6	89	78	7	6	------	↘ d° p.
3	31	25.3	84	82	6	6	------	d° a. ↙° p.
4	30.1	25.2	86	78	6	6	.5	☊° a. ●° p.
5	30.7	25	90	78	8	7	9.1	●° a.
6	29.6	25.4	84	78	9	7	1.5	●° a. p.
7	31.1	25.1	94	79	9	8	7.7	●° a. ⌒° ↙° p.
8	31.3	24.3	94	68	6	4	------	d° ↙° p.
9	30.6	24	97	75	4	7	3.5	☊ a. d° ●° a. p.
10	30.6	24.6	93	79	8	6	7.4	d° p.
11	29.8	24.5	99	81	8	8	10.6	● a. p. d° ∪° ◪
12	27.4	24.5	98	87	9	10	35.3	↙° ●° a. ⊤° ● p.
13	27.6	23.4	99	91	10	10	2.3	● a. d° a. p.
14	27.4	23.3	97	100	9	10	61	d a. ● a. p.
15	30.6	------	100	82	10	8	10.2	● d° a. ∪☿ p.
16	31.2	24.7	90	82	9	9	1.5	●° a. p. ○☿ ∪ ☋ p.
17	30.2	26.4	87	78	8	8	5.5	● ⊤° a. ●° ∪° ☋☿ p.
18	31.7	25.5	95	82	6	9	2.3	d° a. ● ↘ p.
19	31.4	25.6	91	78	9	6	.5	∪☿ ●° ○° ⊕☿ ↘
20	30.8	26.6	87	79	8	7	2.1	∪ d° ●° a. ↘ p.
21	30.8	26.3	87	82	4	6	18.8	● a. p.
22	31.8	24.5	98	72	8	4	------	● a.
23	31.5	25.8	89	74	8	5	------	d° ↙° p.
24	31.7	26.3	86	74	7	5	------	d° a. p. ⌒° p.
25	30.8	24.4	91	74	4	5	------	☊° a.
26	30.4	25.6	88	74	6	5	1	↙° p.
27	30.1	24.5	91	74	8	5	------	● a.
28	30.6	25.2	82	72	6	3	4.8	↙° ●° ⌒° a. p.
29	30.3	23.7	97	72	9	4	------	●° d° a.
30	30.7	23.8	90	72	6	4	------	☊° a. ↙° p.
31	30.4	23.8	86	72	9	8	.3	●° ⌒° a. ○ d° p.
Mean	30.4	24.9	91.2	78.4	7.5	6.6	------	
Total	------	------	------	------	------	------	192.7	

METEOROLOGICAL DATA, ETC.—Continued.

MAASIN.

[$\phi = 10°\ 08'$ N; $\lambda = 124°\ 50'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	21.6	96	92	10	10	18.1	d² a. d p.
2	28	21.6	95	93	10	10	59.4	d ● a. p. ↘ p.
3	28.6	23.2	87	80	10	10	------	d a.
4	29	23.4	93	77	10	10	------	
5	29.6	23.5	93	78	10	5	------	d² a. ∪ᶜ p.
6	30.1	23.1	96	83	10	10	------	d° a. p. ↘ ∪² p.
7	30.2	22.8	91	84	10	10	------	d° ↘ p.
8	28.8	21.4	89	75	10	7	------	d° ⌒° p.
9	28.9	21.5	91	85	10	10	------	
10	31.4	21.3	91	92	10	10	18.3	↙° ● ↘ ∪² p.
11	29.6	21.2	91	89	10	10	31.5	d ● a. p. ↘ ∪² p.
12	29.5	21.1	95	90	10	10	30.2	● a. p.
13	28.6	21.1	95	85	10	10	7.1	d a. ●° ⌒° p.
14	30	23.4	96	75	10	10	------	∪² ↘ p.
15	29.4	23.5	91	85	10	10	------	
16	29.4	23.2	90	81	10	10	------	d p.
17	29.5	22.4	93	92	10	10	46.7	● a. p. d ⌒² ↘ p.
18	29.5	22.4	93	77	10	10	------	
19	29	23.4	90	84	10	10	------	d a. p. ↘ p.
20	29.4	22.5	88	86	10	10	------	d° ↘ p.
21	29.4	22.4	91	83	10	10	41.4	d ● p.
22	29.4	22.4	97	92	10	10	49.5	d ● a. p.
23	29.5	22.4	97	90	10	10	------	
24	29.4	22.5	95	78	10	10	------	∞² ↘ p.
25	31	22.4	95	86	10	10	------	
26	31	22.6	94	85	10	6	------	♌ d° a.
27	31	22.4	95	80	10	10	15.2	d° ⌒ a. ● p.
28	30.9	22.5	91	71	10	10	------	
29	31	22.2	91	79	10	10	8.6	⌒² a. d a. p.
30	30.4	24	93	83	10	10	42.9	● p.
31	29.8	23.2	91	76	10	10	------	
Mean	29.7	22.5	92.7	83.4	10	9.6	------	
Total	------	------	------	------	------	------	368.9	

SAN JOSE, BUENAVISTA.

[$\phi = 10°\ 44'$ N; $\lambda = 121°\ 55'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.9	21.3	93	69	3	10	------	
2	31.9	21.3	93	65	9	6	1.3	
3	28.9	23.2	92	85	10	10	7.9	d° a. ●° p.
4	35	23.9	75	62	6	4	1.8	● ↙° ┬ °p.
5	32.6	22.8	89	66	5	7	------	d° p.
6	32.6	21.4	91	67	3	8	------	↙° p.
7	31.8	20.8	95	82	2	10	18.8	d° ● p.
8	31.8	21.6	95	72	3	4	------	
9	30.6	20.2	91	77	3	6	------	↙° p.
10	31.8	21.9	93	73	4	2	------	↙° p.
11	------	------	------	------	------	------	------	
12	------	------	------	------	------	------	------	
13	32	21.6	87	69	6	4	------	↙° p.
14	32.1	21.8	89	67	4	5	------	
15	32.5	22.8	88	78	5	9	4.8	┬² ● p.
16	31.4	21.6	91	73	7	6	------	d° a.
17	31.8	20.8	92	75	4	8	.8	● p.
18	33.1	21.4	96	69	6	6	------	↙° p.
19	31.2	21.4	88	71	4	3	------	♌° a.
20	------	21.6	91	68	2	10	------	
21	------	------	------	------	------	------	------	
22	------	------	------	------	------	------	------	
23	------	------	------	------	------	------	------	
24	------	------	------	------	------	------	------	
25	------	------	------	------	------	------	------	
26	------	------	------	------	------	------	------	
27	------	------	------	------	------	------	------	
28	------	------	------	------	------	------	------	
29	------	------	------	------	------	------	------	
30	------	------	------	------	------	------	------	
31	------	------	------	------	------	------	------	
Mean	31.8	21.7	90.5	71.6	4.8	6.6	------	
Total	------	------	------	------	------	------	------	

CUYO.

[$\phi = 10°\ 51'$ N; $\lambda = 121°\ 01'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	26	86	84	10	9	------	
2	29.2	26.5	90	86	8	9	4.6	
3	27.4	24.9	93	86	10	10	97.2	● d a. p.
4	29.8	23.4	98	84	10	9	7.4	● a. ⌈◁ p.
5	31.9	23.6	99	------	9	8	------	
6	30.3	26.4	86	------	9	7	------	
7	30.1	26.1	87	86	8	6	------	d ⊽ p.
8	29.8	24.6	88	86	9	7	------	
9	29.2	26.1	87	85	8	7	------	⌒ p.
10	30	26.1	86	86	9	8	------	
11	29.7	26.3	83	84?	9	8	------	
12	29.7	26.3	83	84?	9	8	------	
13	30.2	26.1	85	------	8	7	------	∪ ⊽ p.
14	30.1	26.1	86	85?	8	7	------	
15	30.5	26	89	86	8	8	.5	●° ⊕ ⊽ p.
16	29.9	25.9	88	79	9	9	------	∪ p.
17	29.9	26.1	85	75	9	9	------	d a.
18	29.2	25.6	82	------	9	8	------	
19	29	25.8	85	------	8	7	------	
20	29	25.5	84	83	8	8	------	
21	29.4	25.4	73	75	9	9	2.5	● d² p.
22	29	25.8	85	73	9	9	------	d p.
23	29.5	25.2	86	76	9	9	1.8	●° a. p.
24	27.8	25.2	89	88	9	9	5.1	●° a. p. ⌈◁ p.
25	29.1	25.1	90	84	10	8	------	↘ p.
26	29.9	25.8	90	80	9	8	------	
27	29.2	25.6	89	78	9	8	------	⊕ p.
28	29.2	25.9	88	80	9	8	------	
29	29.3	25.6	78	72	8	9	------	
30	28.5	25	78	76	9	9	------	
31	28.3	25.2	84	75	9	9	------	
Mean	29.5	25.6	86.5	81.4	8.8	8.2	------	
Total	------	------	------	------	------	------	119.1	

BORONGAN.

[$\phi = 11°\ 37'$ N; $\lambda = 125°\ 26'$ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	24.2	95	68	8	6	6.4	● ≡ a. ◯ ● p.
2	30.5	22	90	67	7	7	90.2	● d a ● ⌈◁ p.
3	27.2	22.6	------	86	10	9	33	↙° ● a. p.
4	30.3	24.4	90	74	8	8	21.6	● a. p.
5	30.6	23.3	------	74	6	4	4.3	● a. p. ◯ p.
6	29.5	24	------	79	7	6	22.1	● a. p. ┬ p.
7	30.5	23.5	93	69	9	6	14.3	● a. ●° ∪ p.
8	29.4	21.7	96	71	6	8	------	♌ a. d ⌒ ⊽ ↘ p.
9	30	21.8	98	78	2	9	24.9	♌ ≡ a. ● a. p.
10	30.1	23.6	97	81	7	6	8.1	● a. p. ∪ p.
11	28.5	23.4	97	91	7	9	63	● a. p. ↘ p.
12	29.5	23.7	89	92	8	9	40.9	● a. p. ┬ p.
13	29.5	23.2	93	74	8	8	6.1	●² a. ∪ p.
14	30	23.4	95	74	8	6	7.6	◯ ● a. p. ∪ p.
15	28.5	23.5	96	88	10	10	11.2	● a. p. ∪ p.
16	29.5	22.6	98	77	5	8	1	♌ ◯° a. ∪ ● p.
17	27.6	22.6	97	75	9	10	54.6	≡ ●² a ∪ ●° p.
18	29	23.1	95	68	9	7	3.6	≡° a. ●° a. p.
19	29	23.3	94	78	7	10	10.4	● a. p.
20	29.3	21.7	95	84	8	8	4.1	♌ ≡° a. ● p.
21	27.5	21	90	90	7	10	22.1	♌ a. ● p.
22	29.6	22	95	81	3	6	1.1	♌ ≡° ●a. ┬ ↘ ²p.
23	29	22.7	97	81	10	9	.8	● a. p. ◠ ↘ p.
24	30	23.8	97	81	7	9	5.8	≡ ● a. ↘ ●° p.
25	30	23.5	97	81	8	7	1.8	● a. p. d ↘ p.
26	30.2	24	97	80	6	6	16	≡° a. ● ↘ p.
27	29.9	23.7	97	78	7	7	8.4	● a. p. ◯ p.
28	29.7	23.2	98	76	7	7	9.4	●° ≡ ◠ a. ● p.
29	27.5	24.4	------	73	7	8	72.7	●° a. ● p.
30	25.7	22	96	94	10	10	56.3	● a. p. ┬ p.
31	28.1	21	94	76	10	9	17	d a. ● a. p.
Mean	29.2	23	95	78.7	7.5	7.8	------	
Total	------	------	------	------	------	------	638.8	

METEOROLOGICAL DATA, ETC.—Continued.

MASBATE.

[ϕ=12° 22′ N; λ=123° 36′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.8	24.8	98	81	8	9	2	
2	30.5	24	100	82	10	10	39.2	
3	26.2	23.2	100	98	10	10	10.2	
4	28.8	24.8	99	89	8	9	1.8	
5	30.8	24.5	98	------	8	6	9.1	
6	30	24	100	86	9	8	11.2	
7	30.2	24	98	85	9	6	1.8	
8	29.6	22.8	98	91	8	8	.5	
9	28.4	24.6	99	97	10	9	10.4	
10	30.8	24.2	99	------	7	6	3.3	
11	30.6	23.8	98	------	8	6	.5	
12	28.8	24.4	98	90	9	8	21.8	
13	30.5	24	99	------	8	9	------	
14	29.8	24.8	99	96	9	9	------	
15	30.8	25.2	98	------	9	9	------	
16	29.6	23.2	98	------	8	8	------	
17	27.6	24.2	98	99	10	10	9.1	
18	28.8	23.4	100	86	9	9	1.5	
19	28.5	23.8	98	98	9	9	.8	
20	28.8	23.6	99	97	9	10	------	
21	27.5	23.8	97	97	10	10	5.1	
22	26.2	23.5	97	98	10	10	18.3	
23	27.8	24.2	99	94	10	8	12.9	
24	27.8	24.6	98	98	10	10	30.5	
25	28.4	23.5	98	97	10	9	------	
26	31.2	24.6	98	------	8	6	------	
27	28.8	25	99	98	9	10	6.3	
28	28.2	24.5	98	97	10	10	7.4	
29	27.5	23	90	95	10	10	1.3	
30	25.8	23.4	90	95	10	10	3.8	
31	28.5	23.4	100	95	10	10	9.7	
Mean	29	24	98	93.3	9.1	8.7	------	
Total	------	------	------	------	------	------	218.5	

ROMBLON.

[ϕ=12° 35′ N; λ=122° 16′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.6	23	98	72	5	2	7.9	● p.
2	29.3	24.4	93	80	10	10	2.3	● a.
3	29.2	23.1	88	92	10	10	41.1	● a. p.
4	30.2	23.7	85	82	10	10	------	≲ p.
5	29.8	26.2	84	69	5	0	------	
6	29.3	24.9	85	71	4	4	13	d a. ● a. p.
7	29.7	24.3	88	74	10	4	2.3	● a. p.
8	29.2	23.8	90	77	5	1	.5	● p.
9	29.3	24.1	86	74	5	10	.5	d ● p.
10	28.5	24.4	89	82	10	10	1	⊤ ● a.
11	30	24.4	92	69	5	3	1.3	● a.
12	29.2	24.2	93	77	7	6	14.7	d a. ● p.
13	29	24.1	92	75	10	1	.5	
14	29.3	24.3	94	75	3	2	9.1	● a. p. ⊤ p.
15	27.6	24.1	90	87	6	8	30.7	● p.
16	28.6	23	99	74	5	2	1.5	● a. p.
17	27.5	24	87	81	10	10	39.7	● a. ●² p.
18	28.8	22.9	77	70	1	6	4.6	● p.
19	28.6	23.3	78	69	10	7	1.5	
20	28.6	24	74	68	9	5	------	● a.
21	28	22	79	70	10	10	7.6	
22	26.8	23.1	85	89	2	10	8.4	● a. p.
23	27.2	23.1	92	86	10	10	8.4	● a. p.
24	25	23.1	92	93	10	10	23.4	● a. p.
25	26.7	23	93	88	10	10	1.6	● a. d a. p.
26	30	24.1	97	81	4	7	------	● a.
27	28.8	24.4	88	79	5	3	38.9	● a. p.
28	25.3	23.2	97	92	10	10	40.7	⊤ a. ● a. p.
29	28	22.5	88	66	6	10	------	● d a.
30	27.1	23.7	80	77	3	8	1.3	● a.
31	29.3	24.1	82	65	5	6	10.2	● a. p.
Mean	28.5	23.8	88.2	77.5	6.9	6.6	------	
Total	------	------	------	------	------	------	312.7	

SUMAY, GUAM (LADRONES ISLANDS).

[ϕ=13° 24′ N; λ=144° 38′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29	25.4	84	71	8	5	2.5	
2	28.4	25.2	84	70	3	5	------	
3	28.8	25.6	86	75	3	4	1.3	
4	28.8	25	84	70	4	3	------	
5	29	24	87	73	6	6	1.3	
6	29	24.2	84	75	4	6	2.6	
7	29.4	25.6	84	68	10	6	2	
8	29.6	24.8	88	68	8	10	3	
9	29.6	24.2	84	67	3	4	------	
10	29.6	25.6	84	69	3	5	1.3	
11	29.8	25.6	84	68	3	5	4.6	
12	29.6	25.2	89	72	6	8	------	
13	29.4	25.2	84	69	6	8	------	
14	28.2	26	87	77	10	10	6.4	
15	28	25	95	84	10	10	27.9	
16	28	23.6	92	90	8	10	16.6	
17	30	24.2	87	64	10	6	6.4	
18	29.4	24.4	85	68	10	10	5	
19	27.2	25.2	92	89	8	10	12.7	
20	29.6	25.8	84	73	5	6	10.4	
21	29.8	23.8	92	68	10	6	8.9	
22	30	24.8	89	81	10	8	4.5	
23	29.8	23.6	86	71	4	6	------	
24	30.2	23	88	64	10	4	------	
25	29.8	25.4	84	68	3	5	------	
26	28.6	24.8	84	77	3	8	1.3	
27	28.6	24	84	70	4	6	2.5	
28	29.2	24.6	84	69	3	7	------	
29	28	24	84	81	10	10	------	
30	28.8	24.6	84	70	3	6	------	
31	29.6	25	84	67	10	6	2	
Mean	29.1	24.8	86.2	72.5	6.4	6.7	------	
Total	------	------	------	------	------	------	123.2	

CALAPAN.

[ϕ=13° 25′ N; λ=121° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.6	22.8	96	69	10	8	5.6	● a. p.
2	29	24	93	84	10	10	14.5	● d p.
3	26.9	23.5	87	83	10	10	14.3	● d a. p.
4	29.2	22.5	85	81	10	10	6.4	● a. p.
5	30	24	88	71	10	4	1	⊤ ● p.
6	30.5	23.7	96	68	10	4	.5	d° a. p p.
7	30	24	95	72	10	4	2.8	● a. p p.
8	29.6	24	96	77	10	10	.5	d a. p p.
9	29.9	22.2	96	65	10	10	------	
10	29	22.6	80	88	10	10	3.8	p d ◠² p.
11	29.2	23.1	97	83	10	10	1.1	d a. ☾ ♃ ●° p.
12	28.6	22.6	97	83	10	10	10.6	● a. p. d p.
13	29.6	23	98	74	10	10	------	d a. ♃° ☾° p.
14	30.2	23.5	98	69	10	6	------	♃° ☾° p.
15	29.5	24	87	76	10	10	1.3	●° ♃° ☾° p.
16	29.4	22.8	98	79	10	10	26.4	●° a. ● p.
17	27.1	22.6	94	88	10	10	2	●° a. p.
18	28.5	23.5	86	70	10	10	.5	p a.
19	28.2	22.5	94	67	10	10	1.6	●° a. p.
20	28.5	22.5	91	63	10	10	------	
21	28.7	20.5	95	71	10	10	24.6	●² p.
22	26.4	21.3	97	77	10	10	1	●° a. p.
23	26.8	22.5	96	97	10	10	10.4	● a.p.
24	26.1	23.5	83	74	10	10	1	●° p.
25	26.7	22.9	87	86	10	10	15.5	● a. p.
26	27.4	22.9	92	92	10	10	6.3	d² a. p.
27	28	23.4	99	83	10	10	1.6	●° d° a.
28	25.4	21.5	97	98	10	10	44	d a. ●² a. p.
29	26.7	22.5	------	71	10	10	1	●° a. p.
30	29.1	21.3	89	71	10	10	------	
31	28.3	22.1	87	72	10	10	2.3	●° p.
Mean	28.5	22.8	92.5	77.5	10	9.2	------	
Total	------	------	------	------	------	------	200.6	

METEOROLOGICAL DATA, ETC.—Continued.

VIRAC.

[ϕ=13° 35′ N; λ=124° 14′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	31.2	22.5	97	92	8	10	24.7	● a. p. ⌐◪ d p.
2	31	23.4	92	65	10	7	4.8	d a. p. ◠ ● p.
3	28.4	22	------	92	10	10	120.2	●² a. p.
4	29.7	23	98	83	10	10	9.2	● a. p. d p.
5	31.6	24.5	89	70	6	6	1	● a. ◠° d p.
6	30.7	23	91	74	8	7	3.3	◺° a. ● a. p.
7	31	24	82	65	8	4	1.8	●° a. p.
8	31.4	22.6	97	73	7	7	------	
9	32	22.5	95	71	9	9	.8	●° ◠² a. d° p.
10	30	24	86	75	7	9	25.2	● ◠ a. ●° p.
11	31.9	24	86	64	6	6	2	◠ ●° p.
12	32	23	79	75	7	8	5.8	⊕ ◯ ◠° a. ● p.
13	30.8	24.8	88	74	7	7	5.9	●° a. ● p.
14	32.2	22	96	71	5	7	25.9	Ω² d a. ◠ ☿° ● p.
15	31.2	23.9	99	68	9	7	------	● a.
16	32	21.6	98	78	6	8	132.1	Ω² a. ◠ a. p. ●² p.
17	29.1	22.5	94	81	10	10	2	● a. ●° d p.
18	31.9	22	83	76	10	6	------	
19	30.6	22.5	86	76	8	9	------	
20	30.4	22.4	83	66	9	10	3.6	
21	29.7	22.5	86	97	10	10	78.5	●² a. p.
22	28.4	23	95	87	10	10	7.1	●° a. p. ⌐◪ p.
23	28.3	24	87	83	9	9	31	●° a. ≶ p.
24	29.4	23	89	78	10	10	28	●² a. ≶ ┼ p.
25	30	23.5	97	81	8	8	16.5	● a.
26	30.9	22.4	96	75	7	6	2.8	
27	31.5	23.6	92	70	9	7	27.9	◠² d ●° a. ● p.
28	28.5	22.9	92	87	9	10	43	●² a.
29	29.2	22.4	91	76	9	8	------	● a.
30	30.3	23.2	90	69	9	8	------	
31	30	22.5	85	79	8	10	4.8	d° p.
Mean	30.5	23	90.6	76.5	8.3	8.2	------	
Total	------	------	------	------	------	------	607.9	

NUEVA CACERES.

[ϕ=13° 37′ N; λ=123° 11′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.5	19.9	96	69	10	8	------	
2	29	22	97	79	10	9	5.6	●° p.
3	25	22.5	93	93	10	10	35.6	● a. p.
4	30.2	22.3	93	75	9	10	5.7	●° d p.
5	32.1	22.4	97	71	7	7	------	
6	30.4	20.2	98	81	6	8	7.9	●° a.
7	31.8	20.2	98	66	5	5	------	
8	31.6	21.5	96	67	9	6	6.7	
9	26.5	22.6	97	88	10	9	9	d° a. ●° a. p.
10	27.3	23	98	90	9	8	3.1	●° a.
11	30.4	20.1	98	74	8	8	------	
12	30	20.5	96	80	7	8	.1	
13	31.2	21.8	95	84	6	8	3.7	●° p.
14	30.6	20.7	98	76	7	9	.3	
15	28.2	22.2	99	81	10	9	2.9	●° d a.
16	29	20.3	98	85	3	10	32.6	●° a. ● p.
17	27.6	21.7	95	84	10	10	.3	●° a. d p.
18	29.3	21.9	84	75	7	8	------	
19	28.6	22	89	90	7	9	1	●° d p.
20	29.8	19.5	95	67	7	10	------	
21	27.4	21	87	97	10	10	76.4	d a. ● p.
22	24.9	21.5	91	95	10	10	116.1	● a. ●² p.
23	28.2	22.7	98	93	10	10	44.4	● a. d p.
24	28	22.3	96	90	10	10	22.6	d a. ● a. p.
25	26	22.6	98	97	10	10	19.7	● d a. p.
26	29	21.2	98	93	10	9	12.5	●° p.
27	30.3	22.2	97	75	10	8	6.8	●° a. p.
28	24.8	22.3	97	97	10	10	40.6	d a. ● p.
29	27.6	22	84	66	9	6	------	
30	28.4	22.1	93	71	10	8	------	
31	29.4	22.2	84	93	7	10	------	d p.
Mean	28.8	21.6	94.6	82	8.5	8.7	------	
Total	------	------	------	------	------	------	453.6	

BATANGAS.

[ϕ=13° 45′ N; λ=121° 03′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.2	21	97	60	5	5	------	
2	29.3	22.4	95	89	7	10	5.4	● a. p.
3	27	21.6	96	85	9	10	1	d a. p.
4	31	23	90	74	9	10	3.6	
5	32	23.3	97	59	9	4	------	● a.
6	32.5	22	97	61	3	7	------	
7	31	22	97	69	5	7	------	
8	30.7	21.3	95	77	7	7	------	
9	31.1	19.5	96	71	3	9	------	Ω a.
10	30.9	18.8	95	87	6	9	.5	d a.
11	31.5	20.6	96	66	9	6	------	
12	30	20.3	96	77	4	7	.3	p a.
13	30.5	21.7	97	80	6	9	10.1	┼ ● d p.
14	32.5	21.3	96	70	5	6	------	┼° p.
15	31.8	22.6	95	69	6	6	------	┼° p.
16	30.4	21.8	96	75	5	9	25.4	p a. d ● p.
17	28.5	21.6	96	81	10	9	.6	● a. d a. p.
18	29.6	21.7	84	67	7	6	------	
19	30.5	21.9	89	76	4	6	------	
20	30.3	19.5	96	59	4	5	------	○ p.
21	30.8	18.6	95	59	5	7	41.7	● p.
22	27	20.6	97	77	9	9	------	● a.
23	26	22.7	94	96	9	10	11.2	● a. p.
24	27.6	22.6	97	84	9	10	.5	d a. p.
25	29.7	21.6	97	75	7	9	------	
26	30.6	22.5	97	70	7	7	------	
27	30	23	91	74	6	6	29.2	● p.
28	24.6	21.7	97	95	10	10	31	● a. p.
29	28.1	21.6	97	65	7	7	------	
30	30.6	18.6	95	68	6	6	------	
31	29.9	19.7	93	66	5	7	------	
Mean	29.9	21.3	95	73.6	6.5	7.6	------	
Total	------	------	------	------	------	------	160.5	

SILANG.

[ϕ=14° 14′ N; λ=120° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28	20.4	98	68	2	7	1.8	● p.
2	27.7	20.2	98	81	10	10	35.1	● a. p.
3	25.6	20.3	98	80	10	10	43.4	● a. p.
4	25.5	21.2	98	80	9	8	37	Ω a. ● a. p.
5	25.2	20	98	83	2	5	------	
6	28	19.5	98	69	7	8	1.3	p a. ● p.
7	28.3	21.5	98	79	10	8	10.4	● p.
8	27.6	21	98	70	3	6	------	p° a.
9	29.5	20.8	97	68	2	3	------	
10	28.6	20.2	98	71	5	8	------	Ω ≡ a.
11	28.4	20	98	71	7	8	------	
12	28.5	19.2	98	70	8	9	3	Ω ≡ p° a. ● p.
13	28	19.1	98	71	10	7	------	●° d p.
14	27.8	19.3	98	71	2	7	------	Ω ≡ a. p° p.
15	28.1	19.8	98	70	5	6	------	Ω ≡ a.
16	28.5	20.3	98	70	6	8	------	Ω ≡ d a.
17	28.2	19.5	97	71	2	7	------	⌐◪ a.
18	28.7	19.1	98	70	7	5	------	
19	28.5	18.8	98	67	4	9	------	
20	28.8	18.5	97	68	2	8	------	Ω ≡ a.
21	28.3	18.8	98	68	10	9	1.5	d a. ● ◠ p.
22	27.8	18	98	73	7	9	2.8	● p.
23	27.2	18.9	98	72	5	9	------	p° a.
24	28.1	18.1	97	70	2	7	------	
25	28.4	18.4	98	70	2	3	------	Ω ≡ a.
26	28.7	18.8	98	70	6	8	3.8	● p.
27	28	18.3	97	72	7	8	61.5	d ●² p.
28	27.6	18	98	73	10	10	22.4	● a.
29	27.1	19.6	98	71	2	5	------	
30	27.5	18.1	98	73	7	8	------	Ω ≡ a. d p.
31	27.2	17.5	98	72	3	6	------	
Mean	27.9	19.4	97.8	72	5.6	7.4	------	
Total	------	------	------	------	------	------	224	

METEOROLOGICAL DATA, ETC.—Continued.

SANTA CRUZ, LAGUNA.

[ϕ=14° 18′ N; λ=121° 25′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.7	21.8	96	68	8	6	1.5	☊² ☰ a. d p.
2	30.7	23	97	84	9	9	14.8	● a. p.
3	27.6	22.9	78	79	9	10	8.4	☇° ●° a. p.
4	27.7	23.1	87	86	9	9	3	●° a. p. d p.
5	29.4	23.4	88	70	9	6	.3	●° a. d a. p. ◠ p.
6	30.5	22.1	98	64	3	4	4.3	☊² ☰ a. ●° p.
7	30.8	23.4	94	76	5	8	2	●° a. d a. p.
8	29.2	21.5	96	75	2	7	------	☊ ☰° a. d° a. p.
9	30.4	21	90	70	2	7	------	☊ a. ☋ p.
10	29.7	20.4	90	82	6	9	4.6	☊ a. d ● ◠ p.
11	29.3	20.2	99	67	6	4	------	☰² a. d ◠° ☋ p.
12	29.6	22.5	83	78	8	8	4.6	☊ a. d a. p. ●° p.
13	29.3	20.4	97	97	9	10	20.3	●° d a. p. ●² p.
14	29.6	19.4	98	71	7	4	14.2	☰ d a. ☋ ●° p.
15	30.2	22.6	97	83	9	8	1.8	●° a. p. d p.
16	29.9	22.1	93	80	8	9	4.1	●° a. p.
17	29.4	21.7	79	75	9	9	1	☇° a. d ●° a. p.
18	28	21.4	82	65	8	8	------	☇° a. p. d p.
19	28.5	22	87	66	5	7	------	d ☾ ☋ p.
20	29.7	22	83	62	9	9	------	☊° a. ☋ p.
21	29.2	18.9	99	68	8	9	24.9	☊² ☰² a. ●² p.
22	29.5	21.9	97	72	10	9	.5	●° d a.
23	26.5	22.7	91	83	9	9	2.6	●° d a. p. ☇° p.
24	27.5	22	84	72	9	9	------	●° a. ☇° d a. p.
25	27.4	22.8	88	79	9	9	------	☊ a. d a. p.
26	29	22.6	89	78	9	9	------	☊° a. d a. p.
27	27.8	22.5	87	86	8	10	80.5	d ●° a. ☐ ☿² ●² p.
28	28.8	22.7	99	89	10	10	34.8	●² a. ●° p.
29	------	22.9	84	68	7	8	.1	●° a. d a. p. ◠ p.
30	27.7	20.7	93	77	9	7	------	☊ d a.
31	28.5	21.4	84	68	8	9	------	☊ a.
Mean	29	21.9	90.5	75.4	7.6	8	------	
Total	------	------	------	------	------	------	228.3	

ANTIPOLO.

[ϕ=14° 36′ N; λ=121° 10′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32	20.1	94	58	5	4	0.1	☊² a. ☌ d° p.
2	28.8	20.8	90	71	8	10	3.3	●° a. d° a. p.
3	27.6	20.7	83	65	9	10	2.3	◠ a. ●° d° p.
4	30.4	21.4	78	71	9	9	2.4	d° ●° ☇ p.
5	31.1	21.8	93	63	6	6	------	☌ ⊕ p.
6	31.4	20.8	90	58	2	3	------	☌ a.
7	30	21.4	95	69	9	7	1	☊ ◠ d² a.
8	30.8	19.6	91	66	3	3	------	☊² a.
9	30	18.8	91	68	2	5	------	☊² a.
10	31.1	18.5	88	61	2	6	------	d° ◠ p.
11	31.3	20.2	95	59	5	4	------	☊² a.
12	30.7	20.4	91	66	3	7	------	☊² a.
13	28.2	20.8	91	87	4	9	5.9	d° a. ●° a.p. ◠ p.
14	31.1	20.8	95	60	3	3	------	☇ p.
15	29.1	21.1	94	79	6	9	.9	d a. p.
16	29.1	21.1	93	75	5	9	.2	d° a. p.
17	28.7	20.9	89	63	9	8	------	
18	29.1	19.9	75	58	4	8	------	
19	29.4	20.8	79	52	2	3	------	⊕ ☾ p.
20	29.6	19.4	81	58	8	8	------	⊕ p.
21	28.4	18.2	87	70	7	9	3	☊° a. ●° p.
22	27.4	20.8	97	83	10	9	1	☰ d² a.
23	28.7	19.9	89	90	9	10	1.5	d a. p.
24	29.4	20.4	79	61	7	8	------	☾ a.
25	31	19.5	94	68	6	9	------	☊² a. ☌ p.
26	30.3	20.4	97	68	6	9	------	
27	30.2	21.3	80	69	8	10	50.5	●² ☇ p.
28	25	21.2	98	84	10	10	39.9	☰ ●² a. d ●° p.
29	28.4	20.4	81	62	7	5	------	
30	28.7	18.8	94	71	5	8	------	☊² a.
31	28.8	18.7	96	56	2	8	------	☊° a. ⊕ p.
Mean	29.5	20.3	89.3	67.4	5.8	7.3	------	
Total	------	------	------	------	------	------	112	

IBA.

[ϕ=15° 20′ N; λ=119° 58′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.9	19	95	65	8	7	------	☊ ☰° a.
2	30.5	20.5	95	72	6	9	2.1	d ●° a. p.
3	32.1	21.9	82	63	10	10	------	d p.
4	34	23.9	73	58	9	8	------	d ◠° a. ☇ p.
5	33	24.3	73	59	10	10	------	
6	32.4	19.7	88	54	4	2	------	☌ p.
7	31.8	20.7	95	64	5	10	------	☰° a.
8	31.5	19.9	95	56	2	3	------	☰° a.
9	32.6	18.5	95	62	2	2	------	☰° ⊕° a.
10	30.4	18.2	96	64	2	4	------	☊ ☰° ⊕ a. ☌ p.
11	31.2	19	94	66	5	4	------	
12	31.2	18.3	94	57	2	5	------	d p.
13	30.9	20	93	68	4	10	.4	☋° d p.
14	32.3	22.6	89	64	8	6	------	
15	31.5	20.8	95	69	8	8	21.7	◠ a. ☐ ☿ ● d p.
16	30.6	21.9	93	71	10	9	------	
17	31.2	21	84	56	6	9	------	◠° a.
18	31.5	22.4	76	62	5	5	------	
19	31.7	22.4	76	58	6	5	------	☾ p.
20	32	21	74	58	9	10	------	◠° a. p.
21	30.1	18.1	95	60	10	9	------	☰° a.
22	30.2	20	95	66	10	10	------	☰° a. ☾ p.
23	30.5	19.5	94	64	10	10	------	◠° a.
24	31.7	19.5	95	63	9	10	------	◠ a. p. ☾² p.
25	30.9	20.1	81	62	10	9	------	◠° a.
26	30.5	20.6	95	71	4	10	------	☰° a.
27	30.6	20.1	96	73	5	10	------	☰° ◠° a.
28	31.9	22.6	94	67	10	10	------	
29	32.3	19.5	87	56	6	8	------	
30	30.6	20.3	75	64	10	10	------	◠° d p.
31	31.5	18.6	94	61	3	8	------	
Mean	31.4	20.5	88.9	63	6.7	7.7	------	
Total	------	------	------	------	------	------	24.2	

TARLAC.

[ϕ=15° 30′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	33.4	20.7	94	58	3	3	------	☊ a.
2	32	20.4	95	68	3	9	------	☊ d a.
3	30.3	21	95	54	4	7	7.6	☊ ☰° a. ● d p.
4	31.5	22.3	91	65	8	7	------	☊ a.
5	32	22.4	92	62	6	9	------	☊ a. d° p.
6	33.2	20.9	95	52	4	3	------	☊ d° a.
7	33	21.8	93	68	4	10	------	☊ a.
8	33.5	20.2	95	58	3	3	------	☊ a.
9	33.4	20.4	95	50	4	1	------	☊ a.
10	33.2	19.5	95	47	2	7	------	☊ a. ☾ p.
11	33	20	94	54	3	4	------	☊ a. ☾ p.
12	33.6	19.4	96	56	4	8	1.8	☊ a. d p.
13	32.6	20.4	95	56	3	4	------	☊ a. ☾ p.
14	34	22.3	96	59	4	9	------	☊ a. ☾ p.
15	33.6	22.3	96	55	4	8	------	☊ a. ☾ p.
16	31.8	21.3	93	55	3	8	------	☊ a.
17	32.4	23.1	91	55	4	7	------	☊ a.
18	30.6	18.9	95	62	4	10	------	☊ a.
19	32	18.2	87	45	3	8	------	☊ a.
20	31.9	18.3	85	54	3	9	------	☊ a.
21	32	18.7	86	56	4	4	------	☊ a.
22	31	20.8	94	56	9	8	------	☊ d° a.
23	31.8	19.6	85	62	10	10	------	☊ a. d p.
24	31.6	18.8	91	50	4	4	------	☊ a.
25	31.8	19.2	92	59	4	8	------	☊ a.
26	32.6	19.5	95	56	2	4	------	☊ a.
27	32.5	21.3	91	53	8	9	1.8	☊ a.
28	26.8	22.5	96	84	9	9	------	● a. d° a. p.
29	31.5	19.6	92	66	8	7	------	☊ a.
30	32	18.8	88	60	3	8	------	☊ a.
31	32.2	19.2	95	56	2	3	------	☊ a.
Mean	32.2	20.4	92.7	57.8	4.5	6.7	------	
Total	------	------	------	------	------	------	11.2	

METEOROLOGICAL DATA, ETC.—Continued.

SAN FERNANDO, UNION.

[ϕ=16° 37′ N; λ=120° 19′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.2	19.4	95	65	2	2	------	☌° a.
2	31	21.4	94	75	3	5	------	☌° a. d° p.
3	30	21.4	95	75	6	10	5.1	
4	30.2	22.9	94	76	10	5	------	●° a.
5	30.6	21.6	97	74	6	2	------	
6	31.9	20.3	93	54	1	1	------	☌° a.
7	31	20.5	93	60	5	1	------	
8	30.6	21	99	68	3	3	------	
9	30.4	21.5	94	65	1	1	------	☌° a.
10	30	19.5	94	64	1	1	------	☌° a. ☋² p.
11	31.4	20	89	67	1	1	------	
12	30.6	19.5	97	66	2	3	------	☰° a.
13	30.6	22	93	70	5	5	------	
14	30.8	22.4	93	70	6	3	------	
15	31.1	22.4	93	73	3	6	------	☌° a.
16	30.3	22.9	91	64	5	10	------	
17	30.4	21.4	95	65	5	3	------	☰° a.
18	29.1	19.9	92	68	2	9	------	☌☌° a.
19	30.1	19.2	94	62	1	3	------	☌° a.
20	29.4	19	93	65	3	6	------	
21	29.5	18.7	92	54	5	3	------	
22	30.4	19.7	90	65	4	5	------	
23	30.4	21	88	61	10	3	------	
24	30.3	20.4	95	64	2	3	------	☌° ☰° a.
25	29	21	95	69	10	4	------	☾∈☿² ☋² a.
26	30	20	92	72	1	3	------	☌° a.
27	30.4	21	93	67	2	3	------	
28	30.2	22.5	91	70	10	6	------	
29	29.2	21.4	90	65	1	6	------	☌° a.
30	30.1	20.9	91	67	3	2	------	☌° a.
31	30.5	19.8	95	68	1	5	------	☌° ☰° a.
Mean	30.3	20.8	93.2	66.7	3.9	4	------	
Total	------	------	------	------	------	------	5.1	

ECHAGUE.

[ϕ=16° 41′ N; λ=121° 39′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	30.4	21.6	99	67	10	3	0.8	☌² ☰² a. ☋° p.
2	28.6	22.3	98	91	9	10	10.6	☿² a. p.
3	26.5	21.2	99	91	10	10	8.4	☿² a. p.
4	24.9	21.6	99	94	10	10	3.6	●° a. ☋° p.
5	29.8	21.8	99	86	10	10	4.6	☋° p.
6	32.6	21.2	99	64	4	4	------	●° a.
7	32.2	21.4	97	78	10	9	1	☿² a.
8	34.9	19.7	99	70	10	8	------	☌² ☰² ☋° a.
9	33.2	21.3	98	63	9	2	------	☌² a.
10	32.2	19.6	98	64	6	5	------	☌² ☰ a.
11	32.5	21.2	97	66	10	4	1.8	☿² a.
12	26.8	21.6	97	89	10	10	21.6	☿² a. ☋° p.
13	25.8	21.2	99	94	10	10	36.3	● a. ☿² a. p.
14	27.4	20.8	99	86	9	10	4.8	●° a. ☿² a. p.
15	25.1	21.3	99	89	10	10	16	☿² a. p.
16	25.4	20.3	99	88	10	10	2.8	●° a. ☋ a. p.
17	25.5	19.6	99	82	10	9	1	☿² a.
18	29.7	19.5	99	71	10	8	------	☿² a.
19	28	17.3	99	65	6	9	------	☌² ☰² a. ☋² p.
20	28.4	18.9	99	58	9	9	------	☌² a. ☾² a. p.
21	26.6	17.9	99	77	9	10	3	☌² ☌☌² a. ☋ p.
22	27.8	20.3	98	66	10	10	3	☿²☌☌² ☾²a. ☋° p.
23	26.7	20.9	99	83	10	10	2.3	☿² ☾° a. ☋° p.
24	25.4	19.7	99	82	10	10	.5	☿² a.
25	27.4	19.9	99	72	10	10	------	
26	27	20.5	98	82	10	10	.5	☌° a. ☋ p.
27	26.8	21.4	99	74	10	10	4.3	☿° a. p.
28	27.1	21.5	99	70	10	10	1.3	☿² a. p.
29	27.3	20.3	99	69	10	8	------	⊕° a. ☐ p.
30	28.4	19.1	99	66	9	9	------	☾° a. p.
31	26.6	20.8	97	76	10	10	------	
Mean	28.3	20.5	98.6	76.5	9.4	8.6	------	
Total	------	------	------	------	------	------	128.2	

CANDON.

[ϕ=17° 12′ N; λ=120° 26′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	29.9	21.2	88	69	7	5	------	☌² a.
2	31.5	23.3	87	68	10	4	------	☌² a.
3	29.7	22	74	72	3	10	3.8	☌° a.
4	30.9	22.7	87	57	10	9	------	p d a.
5	30.9	23.2	83	63	5	4	------	☌² a. ☋ p.
6	30.9	21.7	85	67	2	3	------	☌² a. ☋ p.
7	30	21.2	86	72	0	0	------	☌² a.
8	29.7	22	79	70	2	7	------	☌² a.
9	29.7	22.3	82	60	1	0	------	☌² a.
10	30.2	20.2	75	65	2	0	------	☌² a. ☋² p.
11	30.2	21.8	82	68	1	3	------	☌² a. ☋ p.
12	29.9	21.6	79	61	6	8	------	☌² a.
13	30.6	23.8	83	63	10	9	------	☿° a.
14	31.4	23.5	79	63	10	7	------	☿° a.
15	30.5	24.2	71	61	9	9	------	☌° a.
16	31.1	23.5	74	44	9	9	------	☌ ☿° a.
17	31	23.8	64	53	10	8	------	
18	29.1	22	72	64	7	10	------	☌ a.
19	29.4	21	74	59	4	8	------	☌² a. ☋² p.
20	28.9	20.2	81	61	0	7	------	☌² a.
21	28.6	21	73	56	9	8	------	☌ a.
22	30.7	21.5	69	48	10	7	------	☌ a.
23	29.9	21.5	80	59	8	8	------	☌ a.
24	30.2	21	70	58	5	9	------	☌ a.
25	29	22.5	72	54	7	9	------	☌ a.
26	30	21.[illegible]	81	58	8	6	------	☌ a.
27	29.6	21	80	68	5	8	------	☌ a.
28	29.9	22.7	82	66	7	9	------	☌ a. ⊤° p.
29	29.4	22.8	77	64	10	8	------	
30	29.1	22.4	81	68	10	8	------	☌ a.
31	29.1	21	82	63	7	6	------	☌² a.
Mean	30	22.1	78.5	62	6.3	6.6	------	
Total	------	------	------	------	------	------	3.8	

LAOAG.

[ϕ=18° 12′ N; λ=120° 35′ E]

Day.	Temperature. Maximum.	Temperature. Minimum.	Relative humidity. 6 a. m.	Relative humidity. 2 p. m.	Cloudiness. 6 a. m.	Cloudiness. 2 p. m.	Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	32.7	20.5	99	58	0	1	------	☌² ☰ a.
2	34.3	19.7	96	47	0	1	------	☌² ☰° a.
3	33.2	20.5	83	57	2	9	------	
4	32.3	23.7	79	57	10	9	------	
5	34.1	22.2	88	57	7	6	------	
6	34.3	20.9	88	66	0	1	------	
7	33.3	19.5	97	55	0	1	------	☌² ☰ a.
8	30.9	21.4	95	62	0	3	------	☌² ☰° a.
9	31.8	18	97	62	0	3	------	☌² ☰ a.
10	30.8	20	97	63	1	6	------	☌² ☰ a.
11	31.2	21.6	88	68	1	3	------	
12	31.3	21.5	93	59	2	8	------	☾ p.
13	31.6	24.1	82	57	10	9	1.3	☿° a.
14	29.7	23	89	65	10	10	------	●° a. ↙° ☿° p.
15	29.4	21.3	77	62	10	10	------	↙° a. p.
16	31.2	23	70	53	4	6	------	
17	31.5	23.3	65	44	4	4	------	
18	32.7	17.8	91	46	0	5	------	☌ a.
19	32.2	17.5	92	55	0	3	------	☌° a.
20	30.8	17.6	92	67	0	4	------	☌ a. ☋ p.
21	31.3	18	95	64	1	8	------	☌² ☰° a.
22	32.3	18	91	48	8	4	------	
23	29.4	22.6	79	62	9	7	------	
24	32.8	20.6	83	43	1	4	------	
25	32.2	17.3	94	63	2	8	------	☌ a.
26	33.3	17.5	97	50	0	2	------	☌² ☰ a.
27	32.4	18.9	93	55	2	7	------	☌ a.
28	33.8	21.3	92	47	1	4	------	
29	33.3	19.6	81	45	1	5	------	
30	31.6	20.1	91	62	0	3	------	
31	33.4	19.4	------	56	0	4	------	
Mean	32.1	20.3	88.5	56.6	2.8	5.1	------	
Total	------	------	------	------	------	------	1.3	

METEOROLOGICAL DATA, ETC.—Continued.

SANTO DOMINGO.

[ϕ=20° 28′ N; λ=121° 59′ E]

Day.	Temperature.		Relative humidity.		Cloudiness.		Rain, 24 hrs. beginning 6 a. m.	Miscellaneous.
	Maximum.	Minimum.	6 a. m.	2 p. m.	6 a. m.	2 p. m.		
	°C.	°C.	P. ct.	P. ct.	0–10.	0–10.	mm.	
1	28.8	24.4	84	71	4	5	0.4	d p.
2	28.3	24.2	82	74	3	6	29.7	● p.
3	28	22	80	66	8	8	12	d°a.●a.p.○°p.
4	24.4	22.4	90	90	6	10	72.6	◠ a. ● a. p.
5	27.5	22.3	92	92	10	10	30.2	● a. p. d p.
6	28.3	23.5	93	77	9	2	7.1	● p.
7	26.9	23.3	91	81	3	3	5.1	d° ◠² a. ● p.
8	24.2	20	90	90	10	10	14.4	◠ d a. ● a. p.
9	24.3	22.2	87	86	10	10	2	●° p.
10	25.4	22	90	84	10	10	10.9	d ◠² a.
11	23.3	21.5	86	83	10	10	10.1	● a. p. ↙°° p.
12	24.3	21.4	94	82	10	10	23.2	d a. ● a. p.
13	27.3	21.8	88	77	8	9	------	● a.
14	24.3	21.9	90	84	10	10	10.4	d a. ● a. p. ↙°° p.
15	21.5	20.2	86	85	10	10	27.2	↙ ● d a. p.
16	22.9	18.9	81	71	10	9	1.3	●° p.
17	24.6	19.5	80	66	7	6	------	d° a.
18	25.4	20.3	79	59	8	1	------	
19	26.4	21.7	79	69	8	3	1	
20	26.5	20.5	80	67	1	1	------	●° a. Ω p.
21	26.8	21.2	87	80	8	8	10.2	
22	22.9	20.2	90	83	10	8	18.1	● a. p. d p.
23	22.2	19.2	76	70	9	10	.5	d° a. p° p.
24	24	20.3	77	72	4	6	10.9	● p.
25	24	19.5	79	81	10	10	37.3	●°a. d a. p. ◠ p.
26	22.2	19.3	92	73	10	9	7.9	● d a. p.
27	24	19.1	82	78	10	10	7.1	d a. ● p.
28	24.2	20.6	84	69	10	7	.8	● a.
29	25.5	20.6	81	70	8	7	4.9	● ◠ a. d° ●° p.
30	26.1	20.8	80	71	2	7	6.4	●° p.
31	26.1	21.7	76	66	1	7	------	
Mean	25.2	21.2	84.7	76.4	7.6	7.5	------	
Total	------	------	------	------	------	------	361.7	

SEISMOLOGICAL BULLETIN FOR DECEMBER, 1910.

By Rev. MIGUEL SADERRA MASÓ, S. J.,
Assistant Director of the Weather Bureau.

EARTHQUAKES FELT IN THE PHILIPPINES.[1]

14, $15^h\ 55^m$. **Sarangani Island** (S of Mindanao). Oscillatory earthquake of intensity III.

15, $15^h\ 35^m$. **Cotabato** (SW of Mindanao). Oscillatory earthquake. Direction, ESE–WNW; intensity, III; duration, 5 seconds.

16, $22^h\ 47^m\ 30^s$.* **Southern Mindanao.** Earthquake of intensity VII–VIII, perceptible throughout the island. The meizoseismic area must have been of very irregular shape, with the major axis in the direction SSW–NNE, from west of Sarangani Island toward the Agusan Valley, probably along the western portion of the volcanic region of Mount Apo. The isoseismic curve VI inclosed the Districts of Cotabato and Davao and the southern part of the Agusan Valley, up to a distance of more than 300 kilometers from Sarangani, in whose neighborhood, we believe, was situated the southern extremity of the epicentral line. Everywhere within the isoseismal VI, the series of continuous shocks constituting the earthquake was of extraordinary duration: all the observers assign to it one minute, at the least. As we have no observations from the eastern part of the Cotabato District, we are unable to state whether the disturbance had the same intensity all along the epicentral line which, as stated, seems to have extended from the west of Sarangani Island in a SSW–NNE direction as far as the Agusan Valley, or whether perhaps there were in reality two centers of maximum intensity, one west of Sarangani, and the other in the central or southern part of the Agusan Valley. On Sarangani Island light aftershocks were felt at intervals of about 3 minutes during the first hours after the earthquake; in the Agusan Valley they occurred likewise, but less frequently; while no such shocks appear to have been noticed at Davao, although this station may be considered as intermediate, since it is not far from the straight line joining the center in the Agusan Valley with that near Sarangani Island.

17, $2^h\ 55^m\ 9^s$.* **Southern Mindanao.** Earthquake of intensity VI in the same region and originating from the same center as the preceding. Repetitions of force IV took place at $14^h\ 23^m\ 58^s$* of the same day, December 17, and at $10^h\ 47^m\ 45^s$* of the following, December 18. During the time intervening between the principal disturbances, aftershocks of force III and II were felt on Sarangani Island at intervals varying between five and forty minutes on the 17th, and between one and one and one-half hours on the 18th and 19th. In the Agusan Valley nothing seems to have been felt on the 18th, except the principal earthquake at $10^h\ 47^m\ 45^s$*; while at Davao there was, in addition to the one just mentioned, a disturbance of intensity II at $23^h\ 45^m$.

[1] The intensity of earthquakes is given in the notation known as the scale of De Rossi-Forel. The time is stated as indicated by the seismographs at the Central Observatory whenever the disturbance has been registered by them. This fact is denoted by an asterisk (*). Otherwise the time is that noted by the observers who sent the notice. All time indications are in the official time of the Archipelago, which is that of the one hundred and twentieth meridian east of Greenwich.

The four principal earthquakes on December 16, 17, and 18 have been registered not only by all the seismographs in the Far East, but likewise by those in Australia and Europe. Concerning America, we have only the observations of Santa Clara College, California, where the seismograph appears to have recorded only the earthquake at $22^h\ 47^m\ 30^s$* of the 16th.

19, $4^h\ 23^m$ **Nueva Caceres** (SE of Luzon). Earthquake of intensity II.

22, $10^h\ 49^m\ 48^s$.* **Vigan** (NW of Luzon). Earthquake of intensity III, lasting 4 seconds.

26, $21^h\ 47^m$. **Northern part of Agusan Valley** (Mindanao). Oscillatory earthquake at Butuan, having a SW–NE direction and intensity III; in the same locality a feebler shock had been felt in the early morning of the same day. At Talacogon, 50 kilometers to the south, only the shock at $21^h\ 47^m$ was felt, having force II.

27, $2^h\ 46^m$. **Cotabato** (SW of Mindanao). Oscillatory earthquake, consisting of two undulations in the direction SW–NE, having force II–III.

28, $0^h\ 26^m$. **Tacloban** (NE of Leyte). Oscillatory earthquake of intensity III. This disturbance was probably identical with the one registered by the seismograph at Butuan in the early morning of the same day. In this case the epicenter would have to be sought south of Leyte Island.

29, $21^h\ 8^m\ 57^s$.* **Central Mindanao.** Earthquake of intensity IV, whose epicenter lay probably east of Illana Bay. It was felt with force IV in the region of Cotabato, and with force III and II in those of Lake Lanao, the Agusan Valley, and Davao, and was registered by the seismographs of the Far East and of Europe.

29, $23^h\ 10^m$. **Borongan** (E of Samar). Oscillatory earthquake of intensity III and 3 seconds' duration.

30, $8^h\ 49^m\ 26^s$.* **Agusan Valley** (Mindanao). Earthquake of intensity VII, whose epicenter was in the northern part of the valley. At Butuan, the only place of some importance within that region, it brought down light partition walls, cracked masonry work, rang heavy bells, overturned all kinds of objects, and caused large waves in the river, which capsized small craft. During the long interval of one minute which, it is said, the earthquake lasted, two series of movements were plainly discernible: preliminary, gentle movements for 10 seconds, followed by terrible vertical and horizontal shocks for the rest of the time. From the phenomena observed at Butuan as well as those on the neighboring shores of Butuan Bay, it appears to follow that the epicentral line passed very close to the said town. To the south of Butuan, the earthquake was felt with intensity VI at Talacogon, at a distance of 50 kilometers, and with intensity IV at Davao which is some 200 kilometers from Butuan. As to the north of the latter town, the report received from Surigao, distant about 100 kilometers, indicates that, judging from the impression made not only on such persons as were quiet within their houses, but also on those walking in the streets, the intensity was not below V. The station at Cebu and those in Samar and Leyte, all distant somewhat over 300 kilometers, assign to it force III. We have no reports from the eastern coasts of Mindanao; in the west of the island, the disturbance was felt near Lake Lanao and at Cotabato, at a distance of approximately 200 kilometers, its intensity being designated as III. These data would indicate that the isoseismal corresponding to intensity III was a very elongated ellipse, its major axis lying in the direction N–S and having a length of more than 600 kilometers. The seismographs of the Far East and of Europe recorded the quake; for America we have no data.

30, $20^h\ 5^m$. **Cotabato** (SW of Mindanao). Earthquake of intensity II.

31, $2^h\ 55^m\ 3^s$.* **Southern Mindanao.** Earthquake of intensity V, having the same origin as those of the 16th, 17th, and 18th. It was perceptible in the districts of Davao, Cotabato, Lanao, and Agusan. The observer at Davao assigns to it force IV, those at Cotabato and Lanao describe it as of intensity III, while in the Agusan Valley it was II–III. We have no report from Sarangani Island. The quake was registered at Manila and Zikawei; the European seismographs seem to have recorded only the waves of the principal phase.

31, $5^h\ 55^m$. **Calbayog** (NW of Samar). Earthquake of intensity II.

RECORDS OF THE MICROSEISMOGRAPHS.

[Time of the one hundred and twentieth meridian east of Greenwich. Midnight = 0h.]

No.	Date.	Character.	Instrument and component.	Beginning. First preliminary tremors.	Beginning. Second preliminary tremors.	Beginning. Principal portion.	Maximum range of motion. Hour.	Maximum range of motion. Amplitude (2a).	Maximum range of motion. Period.	End.	Remarks.
				h. m. s.	*h. m. s.*	*h. m. s.*	*h. m. s.*	*mm.*	*s.*	*h. m.*	
188	1	I_d	V.	19 27 45	----------	----------	----------	------	------	19 41	
189	1	II_r	V.	23 46 35	23 49 42	23 53 39	0 00 32	0.02	10.4	0 50	Vertical Component 0.01 mm.
			H. NNW	23 46 37	23 49 45	23 53 32	23 56 38	.18	9.6	0 33	
			H. WSW	23 46 37	23 49 36	23 53 34	23 57 26	.23	8.7	0 47	
190	4	I	V.	----------	----------	19 18 03	----------	------	------	20 00	
			H. WSW	----------	----------	19 18 03	----------	------	------	20 01	
191	4	II_d	V.	23 46 58	----------	23 47 13	23 47 57	1.68	2.4	23 54	V. C. 0.69 mm.
			H. NNW	23 46 59	----------	23 47 14	23 47 47	.41	5.1	23 53	
			H. WSW	23 46 59	----------	23 47 14	23 47 45	.33	3.6	23 53	
192	6	I	V.	----------	----------	0 30 25	----------	------	------	0 58	
			H. WSW	----------	----------	0 32 00	----------	------	------	1 06	
193	9	I_d	V.	22 43 23	----------	22 43 59	22 44 13	.12	2.4	22 47	V. C. 0.18 mm.
194	10	II_u	V.	17 35 22	17 42 35	17 48 49	17 53 18	.05	22.4	19 25	V. C. 0.01 mm.
			H. NNW	17 35 24	17 42 38	17 50 09	17 53 22	.30	19.5	19 12	
			H. WSW	17 35 24	17 42 38	17 49 56	17 53 02	.27	17.7	19 18	
195	13	II_u	V.	19 50 53	20 03 21	20 19 30	20 34 34	.02	18.4	21 39	
			H. NNW	19 50 58	20 04 30	20 21 11	20 44 54	.07	17.4	21 40	
			H. WSW	19 50 58	20 03 11	20 20 56	20 34 28	.09	18.6	21 35	
196	15	I	V.	4 56 27	----------	----------	----------	------	------	5 36	V. C. 0.06 mm.
			H. NNW	4 56 27	----------	----------	----------	------	------	5 33	
			H. WSW	4 56 27	----------	----------	----------	------	------	5 31	
197	16	II_r	V.	22 47 30	22 49 30	22 52 32	22 54 23	------	16	1 01	V. C. 0.06 mm. Origin NE of Celebes Sea and southern Mindanao.
			H. NNW	22 47 32	22 50 09	22 52 03	22 53 36	------	------	----------	
			H. WSW	22 47 32	22 50 05	22 52 00	22 54 34	------	------	1 04	
198	17	I_r	V.	2 55 09	2 57 14	2 59 37	3 02 56	.17	10.4	4 35	V. C. 0.01 mm. Origin NE of Celebes Sea and southern Mindanao.
			H. WSW	2 55 09	2 57 17	2 59 42	----------	------	------	4 24	
199	17	I	V.	7 20 04	----------	----------	----------	------	------	8 20	
			H. WSW	7 20 04	----------	----------	----------	------	------	8 10	
200	17	I_r	V.	14 23 58	14 26 05	14 28 37	14 32 10	.02	11.2	15 00	V. C. 0.01 mm. Origin NE of Celebes Sea and southern Mindanao.
			H. NNW	14 23 58	14 26 09	14 28 39	14 31 19	.13	13	15 05	
			H. WSW	14 23 58	14 26 00	14 28 54	14 32 14	.26	8.4	15 06	
201	18	II_r	V.	10 47 45	10 50 18	10 53 09	10 57 47	.03	10.8	12 00	V. C. 0.01 mm. Origin NE of Celebes Sea and southern Mindanao.
			H. NNW	10 47 46	10 50 14	10 52 19	10 57 48	.21	13.5	11 49	
			H. WSW	10 47 46	10 50 09	10 52 12	10 57 47	.32	9	11 57	
202	19	I_d	V.	14 24 53	----------	14 25 02	14 25 08	.36	2.4	14 29	V. C. 0.25 mm.
203	19	I_d	V.	14 42 12	----------	14 42 21	14 42 27	.04	2.4	14 45	V. C. 0.03 mm.
204	21	I_d	V.	20 27 23	----------	20 27 39	20 27 55	.12	2.4	20 31	V. C. 0.05 mm.
205	22	I_r	V.	10 49 48	----------	10 50 28	10 50 33	.03	2.4	10 54	V. C. 0.01 mm. Earthquake, III at Vigan (NW of Luzon).
206	26	I	V.	13 41 44	----------	----------	13 52 43	.01	10.4	----------	
			H. NNW	13 41 44	----------	----------	13 54 21	.01	9	----------	
			H. WSW	13 41 44	----------	----------	13 52 33	.05	9.6	----------	
207	26	I	V.	14 11 32?	----------	----------	----------	------	------	14 30	
			H. WSW	14 11 21?	----------	----------	----------	------	------	14 36	
208	27	I	V.	10 29 30	----------	----------	10 40 46	.01	11.6	11 09	
			H. NNW	10 29 30	----------	----------	10 39 14	.08	9.3	11 02	
			H. WSW	10 29 30	----------	----------	10 40 52	.13	9.3	11 08	
209	28	I	V.	----------	----------	2 03 54	----------	------	------	2 27	
			H. WSW	----------	----------	2 03 54	----------	------	------	2 25	
210	28	I_r	V.	2 54 41	2 58 05	3 01 52	3 04 02	.04	9.6	4 03	
			H. NNW	2 54 49	2 57 39	3 01 43	3 05 16	.51	7.8	4 01	
			H. WSW	2 54 49	2 58 08	3 01 48	3 06 18	1.05	8.1	4 12	
211	28	I	V.	----------	14 40 00	----------	----------	------	------	15 04	
			H. NNW	----------	14 40 00	----------	----------	------	------	15 12	
			H. WSW	----------	14 40 00	----------	----------	------	------	15 12	
212	29	II_r	V.	21 08 57	----------	21 11 06	21 14 39	1	10.4	----------	Central Mindanao.
			H. NNW	21 08 57	----------	21 11 14	21 14 00	2.01	9	----------	
			H. WSW	21 08 57	----------	21 11 12	21 16 36	1.70	8.4	----------	
213	29	I_r	V.	21 26 08	21 29 26	21 32 08	21 36 15	.03	11.2	22 47	
			H. NNW	21 26 ?	----------	----------	----------	------	------	22 36	
			H. WSW	21 26 ?	----------	----------	----------	------	------	22 59	
214	30	II_r	V.	8 49 26	----------	----------	8 52 19	1.24	2.4	10 09	V. C. 0.04 mm. N Agusan Valley.
			H. NNW	8 49 27	----------	8 51 31	8 52 19	3.01	8.1	10 11	
			H. WSW	8 49 27	----------	8 51 21	8 51 41	3	9.6	10 23	
215	30	I	V.	----------	----------	20 25 25	----------	------	------	20 46	
			H. WSW	----------	----------	20 25 25	----------	------	------	20 51	
216	31	I_r	V.	2 55 03	2 57 25	3 00 10	3 01 12	.02	10.4	3 51	Southern Mindanao.
			H. NNW	2 55 03	2 57 22	3 00 27	3 01 37	.21	8.1	3 40	
			H. WSW	2 55 03	2 57 20	3 00 29	3 02 24	.28	9.9	3 53	

Instrumental constants.—Vicentini microseismograph (V.): Length of the pendulum, 1.50 meters; weight of the bob, 100 kilograms; period of simple oscillation, 1.2 seconds. Magnification of the record, 50 times.

Horizontal pendulums (H.): Vertical distance between the point of suspension and the point of support, 1.05 meters; horizontal distance between the point of support and the center of the heavy bob, 0.77 meter; weight, 20 kilograms; period of oscillation: NNW–SSE pendulum, T=11.8 seconds; WSW–ENE pendulum, T=8.8 seconds. Magnification of the record: NNW–SSE, 15 times; WSW–ENE, 15 times.

These seismographs have no damping arrangement.

Foundation and location.—The instruments are mounted against a solid cut-stone pier measuring 5 by 5 meters at its base and 3.30 by 3.30 at the top, with a foundation about 4 meters deep, and insulated from the surrounding walls of the building by a space, 2 meters wide, filled with sand. The Vicentini microseismograph stands at a height of 9.5 meters above the ground and 10.5 above the sea level, while the horizontal pendulums stand at 1.50 meters above the ground and 2.50 above the sea level.

Geological structure.—The geological formation of the ground is alluvium and beach sand to a depth of some 14 meters which extends many kilometers toward north and south and only 4 to the east, where volcanic tuff outcrops. To the west there lies the Manila Bay at a distance of some 300 meters. The alluvial plain of Manila is crossed by creeks in many directions and by the Pasig River, which flows in an E–W direction, at a distance of 1.5 kilometers to the north of the Observatory.

TEMBLORES DE TIERRA SENTIDOS EN FILIPINAS.[1]

14, 15^h 55^m. **Isla Sarangani** (S de Mindanao). Temblor oscilatorio de intensidad III.

15, 15^h 35^m. **Cotabato** (SW de Mindanao). Temblor oscilatorio. Dirección, ESE–WNW; intensidad, III; duración, 5 segundos.

16, 22^h 47^m 30^s.* **S de Mindanao.** Terremoto de intensidad VII–VIII, perceptible en toda la isla. El área meizoséismica debió ser muy irregular y prolongada en dirección SSW–NNE, desde el W de la isla Sarangani hacia el valle del Agusan, probablemente á lo largo de la parte occidental de la región volcánica del Apo. La línea isoseista VI encerraba los distritos de Cotabato y Davao y la parte sur del Agusan hasta una distancia de más de 300 kilómetros de Sarangani, en cuyas cercanías suponemos estaba el límite meridional de la línea epicentral. En toda la región encerrada dentro de la isoseista VI el conjunto de choques continuos que constituyeron el terremoto duró extraordinariamente: todos los observadores le dan un minuto por lo menos de duración. Como no poseemos observaciones de la parte oriental del distrito de Cotabato, no es posible determinar si el terremoto tuvo la misma intensidad á lo largo de la línea epicentral que según indicamos parece se extendía desde el W de Sarangani hasta el valle del Agusan en dirección SSW–NNE, ó si realmente hubo dos centros de máxima intensidad, uno al W de Sarangani y otro en la parte central del Agusan. En Sarangani durante las primeras horas después del terremoto se sintieron ligeros aftershocks á intérvalos de unos 3 minutos; en el Agusan los hubo también aunque menos numerosos; sin embargo no parece haberlos habido en Davao que podemos considerar como estación intermedia, por distar poco de la línea imaginaria que une el centro del Agusan con Sarangani.

17, 2^h 55^m 9^s.* **S de Mindanao.** Temblor de intensidad VI en la misma región y originado en el mismo centro que el precedente. Repitió con intensidad IV á 14^h 23^m 58^s* del mismo día 17, y á 10^h 47^m 45^s* del siguiente 18. Entre estos terremotos principales se sintieron en Sarangani aftershocks de intensidad III y II á intérvalos variables de 5 á 40 minutos durante el día 17 y de 1 á 1.5 horas los días 18 y 19. En el Agusan parece que el 18 se sintió solamente el temblor principal que tuvo lugar á 10^h 47^m 45^s*; en Davao ocurrió además de éste uno de intensidad II á 23^h 45^m.

Los cuatro principales terremotos del 16, 17, y 18 fueron registrados por todos los seismógrafos tanto del Extremo Oriente y de Australia como de Europa. De América solamente tenemos datos del Observatorio de Santa Clara, California, cuyo seismógrafo parece que registró únicamente el terremoto que tuvo lugar á 22^h 47^m 30^s* del día 16.

19, 4^h 23^m. **Nueva Cáceres** (SE de Luzón). Temblor de tierra de intensidad II.

22, 10^h 49^m 48^s.* **Vigan** (NW de Luzón). Temblor de tierra de intensidad III, duración 4 segundos.

26, 21^h 47^m. **N del Valle del Agusan** (Mindanao). Temblor oscilatorio en Butúan. Dirección, SW–NE; intensidad, III. Allí mismo se sintió otro de menor intensidad por la madrugada del mismo día. En Talacogon, 50 kilómetros más al S, solo se sintió con intensidad II el que ocurrió á 21^h 47^m.

27, 2^h 46^m. **Cotabato** (SW de Mindanao). Temblor oscilatorio; dirección SW–NE; notáronse dos ondulaciones de intensidad II–III.

28, 0^h 26^m. **Tacloban** (NE de Leyte). Temblor oscilatorio de intensidad III. Probablemente fué este mismo temblor el que registró el seismómetro de Butúan por la madrugada del 28. En este caso el epicentro se hallaría hacia el S de la Isla de Leyte.

29, 21^h 8^m 57^s.* **Parte Central de Mindanao.** Temblor de tierra de intensidad IV. El epicentro se hallaba probablemente al E de la Bahía Illana. Sintióse con intensidad IV en el

[1] La intensidad de los terremotos se indica conforme á la conocida escala de De Rossi-Forel. Cuanto á la hora de su ocurrencia, adoptamos la indicada por los seismógrafos de este Observatorio siempre que los hayan registrado, distinguiéndola por medio de un asterisco (*). En caso contrario copiamos la apuntada por los observadores que nos envían las notas. Todas las indicaciones del tiempo se refieren al tiempo oficial del Archipiélago que es el del meridiano 120° E de Greenwich.

distrito de Cotabato y con intensidad III y II en el de la laguna de Lánao y en los distritos del Agusan y Dávao. Registráronlo los seismógrafos del Extremo Oriente y de Europa.

29, $23^h\ 10^m$. **Borongan** (E de Sámar). Temblor de tierra de intensidad III; duración 3 segundos.

30, $8^h\ 49^m\ 26^s$.* **Valle del Agusan** (Mindanao). Temblor de tierra de intensidad VII. Su epicentro se hallaba en la parte N del valle. En Butúan, única población importante de esta región, tiró al suelo algunos tabiques y agrietó paredes, hizo tocar campanas grandes, tumbó toda clase de objetos y produjo grandes olas en el río las cuales hicieron zozobrar las pequeñas embarcaciones. Durante el largo tiempo de un minuto que dicen duró el terremoto, se distinguieron perfectamente dos series de movimientos: los hubo preliminares y suaves por espacio de 10 segundos y á éstos siguieron terribles choques verticales y horizontales que duraron el tiempo restante. Tanto de lo observado en Butúan como en las vecinas costas de su bahía parece poder deducirse que la línea epicéntrica se hallaba muy cerca de dicha población. Hacia el S de Butúan el terremoto se sintió con intensidad VI en Talacogon, que dista 50 kilómetros, y con intensidad IV en Dávao, que dista unos 200 kilómetros. Hacia el N, las notas de Surigao, distante unos 100 kilómetros, indican que según la impresión que produjo no sólo en los que se hallaban dentro de las casas sino también en los que andaban por la calle, la intensidad no bajó de V. La estación de Cebú y las de Sámar y Leyte, distantes algo más de 300 kilómetros, le dan intensidad III. Según esto la línea isoseista III resultaría elipse muy prolongada en la dirección N–S, en que tendría un diámetro de más de 600 kilómetros de longitud. Registráronlo los seismógrafos del Oriente y de Europa; de América no poseemos datos.

30, $20^h\ 5^m$. **Cotabato** (SW de Mindanao). Temblor de tierra de intensidad II.

31, $2^h\ 55^m\ 3^s$.* **S de Mindanao.** Temblor de tierra de intensidad V. Su origen parece fué el mismo de los temblores de los días 16, 17, y 18. Fué perceptible en los distritos de Dávao, Cotabato, Lánao, y Agusan. La estación de Dávao le da intensidad IV, las de Cotabato y Lanao III; en el Agusan tuvo intensidad II á III. No poseemos datos de Sarangani. Registráronlo los seismógrafos de Manila y Zikawei; los de Europa parece que solamente registraron las ondas de la fase principal.

31, $5^h\ 55^m$. **Calbayog** (NW de Sámar). Temblor de tierra de intensidad II.

REGISTROS DE LOS MICROSEISMÓGRAFOS.

Véase en el texto inglés la tabla correspondiente que contiene una lista completa de estos registros.

APPENDIX TO THE MONTHLY BULLETIN FOR 1910.

APPENDIX TO THE MONTHLY BULLETIN FOR 1910.

ANNUAL SUMMARY OF METEOROLOGICAL DATA FOR MANILA, DEDUCED FROM TWENTY-FOUR DAILY OBSERVATIONS DURING THE YEAR 1910.

Month.	Pressure.		Air temperature.						Wind.			
	Mean.	Departure from normal.	Mean.	Departure from normal.	Maximum mean.	Departure from normal.	Minimum mean.	Departure from normal.	Prevailing direction.	Velocity.		
										Mean.	Departure from normal.	Hourly maximum.
	mm.	*mm.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*	°*C.*		*Km.*	*Km.*	*Km.*
January	760.16	—0.91	24.4	—0.6	30.6	+0.6	20	—0.4	NE quad.	142.7	— 25.5	29
February	59.74	—1.56	25.6	+ .3	31.2	+ .5	21.3	+1	SE quad.	185.8	— 6.7	34.5
March	59.51	—1.01	26.2	— .5	32.3	0	21.7	+ .3	SE quad.	199.5	— 27.2	30
April	58.58	— .80	27.2	—1.0	33.4	— .4	22.3	— .5	SE quad.	198.3	— 39	28.5
May	57.58	— .78	27.4	—1.1	32.6	— .8	23.6	— .3	SW quad.	206.9	— 22.5	38
June	58.06	+ .13	27.2	— .7	33.2	+1	23.4	— .5	SE quad.	123.6	—107.8	23.5
July	57.75	+ .41	26.7	— .4	31.9	+1.1	23.1	— .6	WSW	192.8	— 77.6	41
August	57.19	— .22	26.9	— .2	31.8	+1.1	23.6	— .1	SW quad.	244.6	— 39.6	39
September	57.23	— .27	26.1	— .8	31	+ .4	23.3	— .3	SW quad.	229	— 38.8	40
October	59.27	+ .67	25.9	— .9	31.2	+ .2	22.7	— .4	NE quad.	151.9	— 30.1	37
November	58.01	—1.32	25.6	— .4	30.6	+ .4	22.5	+ .2	N quad.	176.4	+ 12.3	32
December	59.84	— .59	24.8	— .4	30.3	+ .6	21.1	— .1	NE quad.	134.4	— 20.9	34
Annual	758.58	— .52	26.2	— .6	31.7	+ .4	22.4	— .1		182.2	— 35.3	41

Month.	Relative humidity.		Cloudiness.		Evaporation under shelter, total.	Sunshine.		Rainfall.			
	Mean.	Departure from normal.	Mean.	Departure from normal.		Total.	Departure from normal.	Total.	Departure from normal.	Rainy days.	Departure from normal.
	Per cent.	*Per cent.*	*0–10.*	*0–10.*	*mm.*	*h. m.*	*h. m.*	*mm.*	*mm.*		
January	77.1	—0.8	5.5	+0.3	91.6	200 45	+ 7 22	6.2	— 21.4	3	— 2
February	74.7	+ .8	6.2	+1.5	100.1	168 50	— 33 53	11.1	+ .6	5	+ 2
March	73.4	+1.6	6.5	+2.1	118.5	180 10	— 60 07	16	— 3	5	+ 2
April	72.5	+2.8	5.7	+1.7	131	221 15	— 44 37	94.1	+ 62.9	6	+ 2
May	79.9	+3.7	7.2	+1.5	95.1	208 55	— 23 53	192.5	+ 80.3	15	+ 5
June	82	+1	7	+ .1	76.5	168 40	— 5	79.3	—160.1	14	— 2
July	84	— .7	7.5	— .2	70	170 15	+ 16 34	214.9	—174.3	16	— 5
August	84.6	— .3	7.7	— .1	66	185 30	+ 39 32	274.6	— 76.8	20	— 1
September	87.5	+1.8	8.9	+1.2	48	86 40	— 51 24	499.1	+133	26	+ 5
October	85.5	+1.8	7.2	+ .6	55.5	151 35	— 19 47	245.4	+ 52.5	22	+ 6
November	85.5	+2.8	8.2	+1.8	51.9	118 20	— 40 33	184.7	+ 51.8	25	+12
December	82.8	+1.5	7.5	+1.4	64.7	110 05	— 48 29	109.8	+ 47.3	11	+ 2
Annual	80.8	+1.3	7.1	+1	968.9	1,971 00	—264 15	1,927.7	— 7.2	168	+26

CATALOGUE OF PHILIPPINE EARTHQUAKES, 1910.

This catalogue is the continuation of the one published in the Appendix to the MONTHLY BULLETIN for 1909, pages 481 to 486.

Owing to the great inaccuracy of the time kept in many places of the Philippine Archipelago, especially in Mindanao and on other islands at a distance from Manila, we have deemed it to be advisable to adopt for the principal earthquakes the times when they were registered by the seismographs of Manila Observatory. But, while in the MONTHLY BULLETIN we invariably give the time of the one hundred and twentieth meridian east of Greenwich (standard time of the Archipelago), *all* time indications in this catalogue *are in Greenwich mean time.* The time of registration will, of course, be always later than the time of actual occurrence at the epicenter by an interval depending on the distance of the latter from Manila.

For the lighter earthquakes which have not been recorded by the instruments of the Central Observatory, are assigned the times stated in the reports received (reduced to Greenwich mean time). Whenever there was a discrepancy in the time assigned by different observers to one and the same disturbance, we selected the data which seemed to merit greater confidence.

Este catálogo es la continuación del publicado en el Apéndice al Boletín Mensual de 1909, páginas 481 á 486.

Dada la grande inexactitud con que se suele llevar la hora en muchos pueblos del Archipiélago Filipino, especialmente en Mindanao y otras Islas distantes de Manila, hemos creido conveniente adoptar para los temblores principales la hora en que fueron registrados por los seismógrafos del Observatorio de Manila. Pero, mientras en el Boletín el tiempo señalado es invariablemente el del meridiano 120 E de Greenwich (tiempo oficial del Archipiélago), todas las indicaciones del tiempo en el presente catálogo se dan en el *tiempo medio de Greenwich.* Por supuesto, la hora cuando se registraron los temblores siempre será atrasada respecto al tiempo en que la perturbación tuvo lugar en el epicentro en un intervalo proporcional á la distancia del mismo.

Los temblores más ligeros no registrados por los aparatos del Observatorio Central llevan la hora que figura en los avisos que se nos envían (reducida al tiempo medio de Greenwich). Es de advertir, que siempre que recibimos diferentes avisos de un mismo temblor con horas discordantes, tomamos la que á nuestro juicio merece mayor confianza.

CATALOGUE OF PHILIPPINE EARTHQUAKES, 1910.

Date.	Time of occurrence (Greenwich mean time).	Region disturbed.	Probable origin of the disturbance.	Total land area of disturbance.		Intensity (Rossi-Forel).	Remarks.
				Longer axis.	Shorter axis.		
1910	*h. m.*			*Km.*	*Km.*		
Jan. 9	5 55	Northeastern Luzon	Near the NE coast	150	40	IV	Registered at Manila.
10	14 38	Tacloban (NE Leyte)	Local			II	
11	3 43	Romblon Island	do			III	Do.
11	14 35	Borongan (E Samar)	do			III	
12	3 16	Eastern Mindanao	N Agusan Valley	80	30	III	
15	22 22	do	S Agusan Valley	450	300	VII	Registered in the Far East and in Europe.
16	2 7	Cotabato (SW Mindanao)	Local			III	
16	3 15	Eastern Mindanao	S Agusan Valley	400	300	V	
20	9 50	Northern Mindanao	S Butuan Bay	150	40	IV	
22	1 0	South of Mindanao	Sarangani Island			III	
28	14 53	Ormoc (W Leyte)	Local			III	
28	20 55	Cotabato (SW Mindanao)	do			III	
29	21 30	South of Mindanao	Sarangani Island			III	
Feb. 1	22 25	do	do			III	
4	2 34	Northern Mindanao	Butuan Bay	80	30	III	
5	0 20	Cotabato (SW Mindanao)	Local			III	Seismic sounds (VI Davison).
7	15 41	Calapan (N Mindoro)	Local			III	Registered at Manila.
7	16 2	Catbalogan (W Samar)	do			III	Do.
8	8 25	Northern Luzon	Near the NW coast	240	180	V	Registered at Manila. Rumbling sounds (I Davison).
8	23 20	Southeastern Luzon	W Catanduanes Island	160	110	IV	Registered at Manila.
11	0 34	South of Mindanao	Sarangani Island			III	
13	16 54	do	S of Sarangani Islands			IV	Registered at Batavia.
15	6 8	do	Sarangani Island			III	
16	20 43	Cotabato	NE Illana Bay			IV	Subterranean noises (III Davison).
21	0 20	Borongan (E Samar)				III	
26	14 24	Batanes Islands				III	
Mar. 5	18 0	Guam (Marianas Islands)				III	
6	3 0	South of Mindanao	Sarangani Island			III	
6	7 14	Northern Mindanao	S Butuan Bay	100	40	III	
8	1 45	Western Luzon	Off W coast of Zambales	200	60	III	Registered at Manila.
10	3 2	Aparri (NE Luzon)	Local			III	
10	17 7	Northeastern Mindanao	E Butuan Bay	140	90	IV	Preceded by seismic noise (III Davison). Some light aftershocks during the following hour.
16	0 40	Santa Cruz (E Luzon)	Local			II	
20	12 38	Western Luzon	S Zambales range	80	50	III	Registered at Manila.
20	14 5	Legaspi (SE Luzon)	Local, Mayon Volcano			III	Do.
24	4 34	South of Mindanao	Sarangani Island			III	
25	19 18	Central Luzon	Nueva Vizcaya	140	80	V	Registered at Manila. Repeated at $20^h\ 8^m$ and $20^h\ 24^m$ with intensities III and IV.
26	16 45	Western Luzon	S Zambales Range	200	90	III	Registered at Manila.
28	11 0	South of Mindanao	Sarangani Island			III	
30	23 30	do	do			II	
Apr. 2	9 9	Northern Mindanao	N Agusan Valley			V	Seismic noises (VII Davison). Repeated at $9^h\ 30^m$ with intensity III.
3	14 15	South of Mindanao	Sarangani Island			III	
3	21 11	Guam (Marianas Islands)				III	
4	18 20	Northern Mindanao	N Agusan Valley			III	Rumbling sounds (III Davison). Repeated at $18^h\ 45^m$ with same rumblings.
4	21 27	Guam (Marianas Islands)				IV	
10	1 12	Southeastern Luzon	Camarines	180	70	III	Registered at Manila.
12	0 25	Batanes and N Luzon	Formosa ?	2800	(?)	IV	Registered in the Far East and in Europe.
12	15 53	Laoag (NW Luzon)	Near NW coast			III	
14	8 0	South of Mindanao	Sarangani Island			III	
14	20 30	Southeastern Luzon	Mayon Volcano	20	20	III	
18	19 30	Vigan (NW Luzon)	S Ilocos coast	40	10	III	Registered at Manila.
29	1 32	Panay Island	SE part of island	50	40	III	Do.
May 2	14 38	South of Mindanao	Sarangani Island			III	
2	20 0	do	do			III	
3	22 26	Guam (Marianas Islands)				IV	Registered at Manila, Osaka, and Batavia.
4	5 20	South of Mindanao	Sarangani Island			III	
4	22 50	SE end of Luzon	Bulusan Volcano			IV	
5	6 0	South of Mindanao	Sarangani Island			II	
6	6 12	Central Luzon	Nueva Vizcaya	100	50	IV	Registered at Manila.
9	2 30	South of Mindanao	Sarangani Island			III	
10	14 33	Eastern Mindanao	Central Agusan Valley	300	200	V	Registered at Manila, Tsingtau, and Batavia.
10	15 8	do	do	350	300	V	Registered at Manila, Zikawei, and Batavia.
10	16 18	do	Near the E coast	300	250	IV	Do.
10	17 25	Northeastern Mindanao	Near the NE coast	130	90	V	Registered at Manila. Rumbling noise (III Davison).
17	21 46	Northwestern Luzon	Near the Ilocos coast	100	40	III	Registered at Manila.
20	4 4	Northeastern Mindanao	Near the NE coast	200	120	IV	Registered at Manila and Batavia.
23	5 1	Butuan (N Mindanao)	Local			III	
23	9 50	Ormoc (W Leyte)	Near the W coast			II	Repeated at $10^h\ 48^m$.
24	0 50	Virac (Catanduanes Islands)	Local			III	

CATALOGUE OF PHILIPPINE EARTHQUAKES, 1910—Continued.

Date.	Time of occurrence (Greenwich mean time).	Region disturbed.	Probable origin of the disturbance.	Total land area of disturbance.		Intensity (Rossi-Forel).	Remarks.
				Longer axis.	Shorter axis.		
1910	*h. m.*			*Km.*	*Km.*		
May 24	11 43	Northwestern Luzon	Near the Ilocos coast	150	60	III	
24	15 58	South of Mindanao	Sarangani Island			III	
26	5 0	do	do			III	
26	7 15	Ormoc (W Leyte)	Local			III	
30	6 58	Baguio (W Luzon)	Local			III	Registered at Manila.
31	9 43	Northern Leyte	Near Biliran Island	100	90	III	Registered at Manila, Zikawei, Tsingtau, and Batavia.
June 2	20 8	Tacloban (NE Leyte)	Local			II	
7	12 40	Southwestern Luzon	Near the SW coast	350	140	V	Registered at Manila.
10	21 0	South of Mindanao	Sarangani Island			III	
13	0 58	Tacloban (NE Leyte)	Local			III	
13	17 5	NE Mindanao and SE Leyte	Near Dinagat Island	180	60	III	
13	21 34	South of Mindanao	Sarangani Island			II	
14	20 7	Guam (Marianas Islands)				III	
15	13 28	Western Leyte	Near the W coast	120	20	VII	Registered at Manila. Aftershock at $15^h\ 9^m$.
16	14 14	Butuan (N Mindanao)	Local			III	
17	5 30	N Luzon and Batanes	Off S of Formosa			IV	Registered in the Far East and in Europe.
17	9 12	Tacloban (NE Leyte)	Local			II	
17	18 41	do	do			III	
18	9 30	South of Mindanao	Sarangani Island			III	
22	14 55	do	Near Sarangani Islands			IV	Registered at Manila and Batavia.
26	15 18	Tacloban (NE Leyte)	Local			III	
27	15 30	South of Mindanao	Sarangani Island			III	
30	1 35	Santo Domingo (Batanes)	Local			II	
30	2 57	Eastern Mindanao	Agusan Valley	400	80	V	Registered in the Far East and in Europe. Some very light foreshocks had been felt on the 26th, 27th, and 28th.
July 2	5 38	do	do	450	200	VI	Registered in the Far East. Rumbling sounds (III Davison). Duration $1^m\ 20^s$. Aftershocks at $6^h\ 5^m$, $6^h\ 28^m$, and $8^h\ 5^m$.
2	17 47	do	do			IV	
3	0 58	do	do			III	
3	1 59	do	do	450	200	VI	Registered in the Far East and in Europe.
3	5 25	do	do			III	
3	11 35	do	do			III	Two aftershocks of intensity II.
5	22 29	Vigan (NW Luzon)	Local			III	
7	18 30	South of Mindanao	Sarangani Island			III	
7	22 10	Eastern Mindanao	Agusan Valley			III	
10	2 10	Borongan (E Samar)	Local			III	
10	10 40	Eastern Mindanao	Agusan Valley			III	
11	2 41	NE Leyte and S Samar	Near S coast of Samar			III	
12	23 43	do	do			III	
17	12 21	Eastern Mindanao	Agusan Valley			II	
19	20 39	Tacloban (NE Leyte)	Local			II	
21	21 16	NE Leyte and S Samar	Near S coast of Samar	100	80	IV	
22	4 49	Northeastern Mindanao	Near the NE coast	240	100	IV	
22	9 0	South of Mindanao	Sarangani Island			III	
22	14 2	Northeastern Mindanao	Near the NE coast	300	200	V	Registered in the Far East. Light aftershocks at $14^h\ 4^m$, $14^h\ 18^m$, and $14^h\ 25^m$.
23	9 23	do	do			III	
24	19 48	do	do			III	Repeated at $0^h\ 45^m$ of the 25th.
26	13 39	do	do			III	
Aug. 2	18 0	South of Mindanao	Sarangani Island			IV	
7	22 42	Southeastern Luzon	WSW of Mayon Volcano	210	150	IV	Registered at Manila.
11	7 0	South of Mindanao	Sarangani Island			III	
12	3 40	do	do			III	Registered at Batavia.
14	12 15	do	do			III	
14	16 47	Guam (Marianas Islands)				III	
24	19 0	South of Mindanao	Sarangani Island			IV	
26	19 10	Guam (Marianas Islands)				III	
Sept. 1	0 47	Santo Domingo (Batanes)	SE of Formosa			III	Registered in the Far East and in Europe.
4	5 35	Eastern Mindanao	Agusan Valley			IV	Very long duration.
5	19 22	Leyte Island	S of Biliran Island	90	90	IV	
6	2 20	Borongan (E Samar)	Local			III	
10	10 0	South of Mindanao	Sarangani Island			III	
11	14 5	Talacogon (E Mindanao)	Agusan Valley			III	
14	14 0	Iloilo (Panay Island)	SE Panay	40	40	III	Registered at Manila.
16	23 10	Northern Luzon	Babuyanes Islands	100	100	V	Registered in the Far East and in Europe.
20	10 30	Talacogon (E Mindanao)	Agusan Valley			III	
20	21 30	South of Mindanao	Sarangani Island			III	
25	7 45	Talacogon (E Mindanao)	Agusan Valley			III	Some very light shocks were felt on the 30th.
29	19 14	Tacloban (NE Leyte)	Local			III	

CATALOGUE OF PHILIPPINE EARTHQUAKES, 1910—Continued.

Date.	Time of occurrence (Greenwich mean time).	Region disturbed.	Probable origin of the disturbance.	Total land area of disturbance.		Intensity (Rossi-Forel).	Remarks.
				Longer axis.	Shorter axis.		
1910	*h. m.*			*Km.*	*Km.*		
Oct. 2	20 35	Southeastern Luzon	SE Camarines	300	150	III	Registered at Manila. Light foreshock at $20^h\ 28^m$.
2	21 17	do	do	350	200	V	Registered in the Far East. Aftershocks at $21^h\ 26^m$.
3	4 53	do	do	300	150	IV	Registered at Manila. Light foreshock at $4^h\ 5^m$.
3	5 29	do	do	300	150	IV	Registered at Manila. Aftershock at $8^h\ 38^m$.
6	9 17	Talacogon (E Mindanao)	Agusan Valley			III	
6	14 30	Cotabato (SW Mindanao)	NE Illana Bay			III	
6	19 1	Southeastern Luzon	SE Camarines	200	150	III	Registered at Manila.
6	17 10	Cotabato (SW Mindanao)	NE Illana Bay			III	
6	20 05	Talacogon (E Mindanao)	Agusan Valley			III	
7	10 33	Tuguegarao (NE Luzon)	Near Central Range			III	Do.
7	23 4	Guam (Marianas Islands)				IV	Rumbling sound (I Davison).
10	3 45	South of Mindanao	Sarangani Island			IV	
17	19 43	Northeastern Mindanao	E Butuan Bay	200	150	IV	
18	12 15	Tacloban (NE Leyte)	Local			III	
22	8 30	South of Mindanao	Sarangani Island			III	
25	1 42	Southeastern Luzon	Near Mayon Volcano			III	Registered at Manila.
25	11 0	South of Mindanao	Sarangani Island			III	
28	7 5	Talacogon (E Mindanao)	Agusan Valley			III	
30	12 0	South of Mindanao	Sarangani Island			II	
31	1 30	Southeastern Luzon	Near Mayon Volcano			II	
31	20 5	Butuan (N Mindanao)	N Agusan Valley; local			III	
Nov. 4	13 33	Tacloban (NE Leyte)	Near the N coast			III	
5	15 30	Borongan (E Samar)	Local			III	
5	20 10	NE Mindanao and Leyte	E Surigao Strait	250	180	IV	Registered at Manila and Zikawei.
7	0 38	Eastern Mindanao	Near the E coast	600	400	IV	Registered at Manila.
9	2 55	Aparri (NE Luzon)	Near the NE coast	150	50	IV	Do.
11	3 43	Surigao (NE Mindanao)	Local			III	
11	4 0	Butuan (N Mindanao)	S Butuan Bay; local			III	
11	20 37	Surigao (NE Mindanao)	Near the NE coast			IV	
12	6 35	South of Mindanao	Sarangani Island			IV	
13	18 5	Talacogon (E Mindanao)	Agusan Valley			IV	
13	19 50	do	do			III	
16	4 40	Borongan (E Samar)	Local			III	
20	17 6	Calbayog (NW Samar)	N Biliran Island			II	
20	19 4	Samar and Leyte	do	180	100	III	Do.
22	8 40	Talacogon (E Mindanao)	Agusan Valley			IV	
22	21 30	South of Mindanao	Sarangani Island			III	
25	19 15	Southern Mindanao	S Apo Range	400	200	IV	Registered in the Far East.
26	8 18	do	do	500	300	V	Do.
26	21 25	Butuan (N Mindanao)	Butuan Bay; local			III	
27	7 40	Southern Mindanao	S Apo range			III	
27	18 0	do	do			III	
29	7 0	do	do			III	
29	12 0	do	do			III	
Dec. 14	7 55	South of Mindanao	Sarangani Island			III	
15	7 35	Cotabato (SW Mindanao)	NE Illana Bay			III	
16	14 47	Southern Mindanao	W Apo Range	500	400	VIII	Registered in the Far East and Europe. Frequent aftershocks.
16	18 55	do	do	500	400	VI	Do.
17	6 24	do	do	300	250	IV	Registered in the Far East.
18	2 48	do	do	300	250	IV	Registered in the Far East. Frequent aftershocks during these days and on the 19th.
18	20 23	Camarines (SE Luzon)	Local			II	
22	2 50	Vigan (NW Luzon)	Near the Ilocos coast			III	Registered at Manila.
26	13 47	N Agusan Valley	S Butuan Bay	100	50	III	
26	18 46	Cotabato (SW Mindanao)	NE Illana Bay			III	
27	16 26	Tacloban (NE Leyte)				III	
29	13 9	Central Mindanao	East Illana Bay	400	300	IV	Registered in the Far East and in Europe.
29	15 10	Borongan (E Samar)				III	
30	0 49	Agusan Valley (Mindanao)	N Agusan Valley	600	400	VII	Do.
30	12 5	Cotabato (SW Mindanao)	NE Illana Bay			II	
30	18 55	Southern Mindanao	W Apo Range	500	300	V	Do.
30	21 55	Calbayog (NW Samar)	Local			II	

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